

# AIRFIX magazine

May 1975

FOR PLASTIC MODELLERS

monthly 22p



## in this issue

North Sea rig helicopter operations  
Converting the Airfix Avenger kit  
Scratch-built Cruiser Mk IVa tank





## Skill, patience and Humbrol modelling products

Humbrol – the name known and trusted by modellers the world over for quality, reliability and value for money. Dopes, thinners, Britfix adhesives, Multicraft knives, brushes – and, of course, Humbrol's unbeatable range of non-toxic enamel and "Authentic" –

Ask for Humbrol – the name you can rely on. Humbrol modelling products are available from leading Model and Toy shops.

# HUMBROL



**HUMBROL**  
AUTHENTICARD

worth 5p  
**FREE**

with this magazine – part of a range of 20 available at your Model Shop **NOW** – START COLLECTING TO-DAY!

### HASEGAWA

#### 1/72 Scale Aircraft

15 Sabre	40p
16 Freedom Fighter	40p
18 T38A Tallon	40p
38 Shooting Star	40p
53 Heinkel HE51 A1	40p
57 SOC 3 Seagull	40p
90 Nakajima Tojo	40p
91 Nakajima Tony	40p
22 OV 10A Bronco	50p
36 Cessna A37A	50p
51 Seagull Seaplane	50p
52 HE51 Seaplane	50p
58 Fuji T 1A	50p
65 Bell Huey H/C	50p
77 Zero Type 32	50p
93 P47D Razor Back	50p
94 P47D Bubble Top	50p
99 Spitfire Mk I	50p
101 P51D Mustang	50p
12 Mig 21 Fishbed	60p
13 Starfighter	60p
17 A7A Corsair II	60p
19 BAC Lightning	60p
24 OV 1A Mohawk	60p
26 Saab Viggen	60p
28 Harrier	60p
48 Skyhawk	60p
55 Kawanishi Alf	60p
56 Aich E13A Jake	60p
83 Mig 17D/E Fresco	60p
88 T34A Mentor	60p
14 Thunderchief	75p
20 F-4K Phantom II	75p
23 Intruder	75p
35 Super Sabre	75p
37 Voodoo	75p
54 Delta Dart	75p
95 Mitsubishi MU 2S	75p
96 Mitsubishi MU 2J	75p
97 F-15 Eagle	75p
27 Vigilante	£1.00
47 Delta Dagger	£1.00
85 F4E Phantom II	£1.00
21 Kawanishi Type 2 Emily	£3.00
22 Nakajima 'Rita'	£2.25
23 Boeing B47E	£2.95
26 Kawanishi 'Mavis'	£3.00
62 Shinmeiwa	£3.75
63 Marlin	£2.95
69 Betty with Flying Bomb	£1.95
82 Lockheed Neptune	£1.65
1/10 Scale Motor Cycles	
10 Yamaha 250	£2.35
11 Yamaha Sport 650	£2.35
12 BMW R75/5 750	£2.35
15 Yamaha Sport 650 Side Car	£3.95
16 BMW and Side Car	£3.95
1/72 Military 40p each	
1 Willy's Jeep	
2 155 mm M2 Gun	
3 Stuart Mk I	
4 Lee Mk I	
5 Grant Mk I	
6 M3 A1 Half Track	
7 M4 A1 Half Track	
8 Tiger I	
9 Panther	
10 88 mm Flak Gun	
11 8 Ton Half Track	
12 Kubelwagen and Side Car	
13 Schwimmwagen	
14 8 Ton Half Track 20 mm Gun	
15 M4 Sherman	
16 Fuel Truck Isuzu TX40	
17 Starter Truck Toyota GB	
18 SDKFZ 7/2 Half Track	
19 US M24 Chaffee	
20 GMC Personnel Carrier	
21 GMC Gasoline Truck	
22 GMC Dump Truck	
Colour Catalogue 30p post paid	

### FROG

#### 1/72 Scale

F211 Focke Wulf FW190A-3	25p
F216 Fiat G55	25p
F218 Curtiss Kittyhawk	25p
F219 Mitsubishi Zero	25p
F223 Fokker D21	25p
F224 Morane Saulnier 406	25p
F245 Grumman F6F3 Hellcat	25p
F257 Fairey Firefly F Mk I	32p
F420 Westland Lysander Mk I	32p
F163 Vickers Vimy	70p
F178 ME 410	50p
F194 Spitfire XIV/F. Bomb	50p
F200 Meteor F Mk IV	50p
F204 Hunter	50p
F202 Me B110a	60p
F205 Dornier Do 17Z-2	70p
F231 Typhoon	50p
F232 Thunderbolt	50p
F237 Spitfire B/9	42p
F235 Dornier 335	60p
F239 DH Hornet	50p
F244 Grumman Avenger	50p
F256 Westland Lynx	60p
F262 Phantom F4K	70p
F291 Beaufighter Mk 21	60p
F295 Sea Venom	50p
F400 Mirage	50p
F402 Jaguar	60p
F408 Javelin	70p
F428 Tomahawk	42p
F431 Vampire FB Mk 5/50	42p
F434 Heinkel 162	42p

1/32 Scale  
F281 Grumman F6F -/35 £1.95  
Bagged with instructions:

#### 1/72 Scale each 40p

Hawker Harrier	
Super Sabre	
Mig 21 Fishbed	
A-7A Corsair 2	
Voodoo	
Mohawk	
1/32 Scale each £1.20	
FW190A	
ME262A	
ME Bf109	
15 sheets of manufacturers' discontinued decals 25p post paid	

### LIFE LIKE

#### Free Scale Thompson Trophy

20 Gee-Bee	£1.65
21 Laird Turner	£1.65
22 Hall Springfield	£1.65

#### Life Size Antique Pistols each £1.00

200 Western '44'	
201 Buccaneer	
202 Privateer	
203 Yorktown	
204 Bunker Hill	
208 Civil War Navy 36	
225 French Wheelock	
226 Italian Miquelet	
227 Moorish Miquelet	
230 Dutch Flintlock	
231 Peacemaker '45'	

#### Life Size Pistols with Wall Racks each pair £1.50

232 Derringer & Pepperbox	
233 Duelling Pistols	
234 Blunderbus (Single)	£1.50

### TANDAIR

#### 1/32 Drop Tanks

Designed to fit Revell's kit of the F-4J and E Phantom. As reviewed on page 320 of January Airfix Magazine. **Per set 85p**

### NITTO

#### 1/76 Scale AFV's each 49p

1 Panther G	
2 Tiger	
3 Jagdpanther	
4 German 105 mm Gun	
5 German Hanomag SDKFZ 250/10 with BMW M/C	
6 PZKW III with PAK 37 Gun and soldiers	
7 Kubelwagen, BMW M/C PAK Gun and soldiers	
8 Schwimmwagen BMW M/C PAK Gun and soldiers	
1/35 Scale 49p	
37 mm Gun	
Kettenkrad SDKFZ 2 and 37 mm Gun	£1.10
SDKFZ 250/3	£1.70

### NEW PUBLICATIONS

US Scale Modeller May '75 p/p 90p  
(Also in stock June, July '74 and March, April '75)  
De Havilland Venom p/p £1.20  
by Roger Lindsay p/p 90p  
US Scale Aircraft p/p 90p

### JO-HAN

#### 1/72 Scale each 75p

Rufe/Zeke  
P47 Thunderbolt  
ME 109 (G or F)  
and now  
Messerschmitt ME 262  
(Four variants, A-1A, A-2A, B-1A or B-1A/U1)

### ENTEX

1/144 Scale	
B1 Bomber	£2.95
Guppy Cargo Liner	£3.25
1/16 Scale	
1918 Harley Davidson M/C	£1.65
1914 Militaire M/C	£1.65
1924 Ace M/C	£1.65
1/8 Scale	
Ford Turbine Engine	£5.50

### Fujimi

1/76 Scale Military	
10 German Armoured Car	60p
11 Kubelwagen BMW R75	60p
12 Valentine	60p
13 Elephant	65p
14 T34 Russian	60p
15 SU 85	
16 T34-85	
17 Chi-Ha	
D1 German Infantry	60p
D2 German A/T 88 cc Gun	60p
D3 US Infantry	60p
D5 Diorama — A/T Obstacles etc	60p
D6 German Inf. with G/Masks	60p
D7 British Infantry	60p

#### One Cut Series £1.50 each

1 German Secret Strong Point	
2 Guerilla Operations	
3 Strong Point 'Dragon'	
4 Operations 'V-3'	
5 Command Unit	
6 'Z' Order	
7 Attack	
8 Swastika Division	

### AIRMODEL

#### 1/72 Scale Vac-formed

006 Lockheed F-104a/TF (Canopy)	35p
101 NAF 100F S/Sabre (Canopy)	20p
103 MIG 15/21 (Canopy)	20p
104 Fiat G91/Mirage (Canopy)	20p
106 FW200/DO335 (Canopy)	20p
109 Avenger (Canopy)	20p
131 Convair TF 102a (Canopy & Nose)	50p
134 ME109.49 (Canopy)	20p
154 Douglas Skynight (Complete)	£1.10
155 Blohm & Voss (Complete)	£4.50
160 Curtiss SBC4 (Complete)	£1.10
161 Nth. Amer. AJ1 Savage	£2.50
162 Heinkel HE46	£1.15
169 HE119	£1.20
173 Nat 28 Trojan	70p
175 Douglas B66 Destroyer	£1.99
181 Junkers JU86	£2.50
182 Junkers JU287	£2.50
183 Convair XF2Y1 Sea Dart	£1.25
186 Boeing B50	90p
192 Lockheed C140 Jetstar	£1.00
206 Fairchild C123 Provider	£3.55
302 Lockheed HC 130 (Conversion)	35p
303 Junkers JU88A (Conversion)	55p
304 Grumman TBM-3WSU (Conversion)	60p

### CONVERSIONS

White Plasticard	
.005	9p
.010	10p
.015	12p
.020	13p
.030	20p
.040	25p
.060	40p
Clearglaze	
.010	18p
.020	20p
Micro Strip Assorted	28p
Micro Rod Assorted	29p
Micro Gloss	48p
Micro Flat	48p
Micro Sol	48p
Micro Set	48p
Micro Weld	48p
Mek Pak	13p, 18p, 28p
Dulcote	22p
Glosscote	22p
Squadron Green Stuff	48p
Humbrol Green Body Putty	40p

### Postal Charges (UK)

Orders up to £1	18p
Over £1 up to £2	35p
Over £2 up to £3	46p
Over £3 up to £4	54p
Over £4 up to £6	62p
Over £6 up to £8	70p
Over £8 post free	

Goods are offered at prices ruling at date of order and subject to availability.

We regret that we can not answer queries unless accompanied by S.A.E.

Overseas — Send 2 Postal Reply Coupons for Pro-forma Invoice of cost of goods and Overseas Postal Charges.

# ERNEST BERWICK (MODELS TOYS LEISURE) LIMITED

11a NEWLAND STREET, KETTERING, NORTHANTS NN16 8JH Telephone 85998



## KITS AT BUDGET PRICES

TAMIYA			
<b>1/48 Scale Fighters</b>			
Hayate (Frank) .....	£1.30	A6M2 (Rufe) .....	£1.55
Harrier .....	£1.89	A6M2 Type 21 .....	£1.25
Hughes Cayuse .....	85p		
<b>1/72 Scale Fighters</b>			
Zero .....		Shoki .....	
Hayate .....		Shinden all 43p each or £2.10 for all five.	
<b>1/100 Scale Fighters</b>			
MIG19 .....		Skyhawk .....	
Viggen .....		Lightning .....	
F105D Thunderchief .....	72p	Mirage .....	
If more than five kits are ordered deduct 1p from the cost of each one.			
ITALAEREI			
Fiat BR20 .....	£1.40	Caproni CA313 .....	£1.40
JU188 .....	£1.50	Cant Z501 .....	£1.65
HS126 .....	75p	LA5FN .....	50p
<b>HASEGAWA</b>			
F86 Sabre .....	36p	F5 Freedom Fighter .....	36p
Starfighter .....	47p	BAC Lightning .....	55p
MIG17 .....	55p	A7 Corsair .....	49p
Intruder .....	70p	Super Sabre F100 .....	90p
Delta Dart .....	90p	Vigilante .....	90p
Phantom F4E .....	95p	A37A Attack/Trainer .....	47p
Bronco .....	50p	Mohawk OV1A .....	50p
Harrier .....	50p	Mohawk OV1B .....	50p
Eagle F15A .....	75p	Mitsubishi MU2S .....	75p
Spitfire .....	50p	Razorback P47 .....	50p
Marlin .....	£2.65	Boeing B47E .....	£2.65
T33A .....	36p	Neptune .....	£1.55
HE51 float .....	50p	Seagull floatplane .....	50p
<b>MONOGRAM</b>			
<b>1/48 Scale</b>			
Wildcat .....	80p	BF109E .....	80p
Hurricane .....	80p	Avenger .....	£1.00
Helicat .....	£1.00	Corsair .....	£1.00
Stuka .....	£1.00	Typhoon .....	£1.00
Mosquito .....	£1.50	D0335 Arrow .....	£1.60
Trojan .....	80p	Mustang P51B .....	80p
<b>1/72 Scale</b>			
F15 Eagle .....	£1.60	Tomcat F14A .....	£1.60
ME110 .....	80p	Twin Mustang .....	£1.50
Skyraider .....	85p	Huey Gunships .....	£1.20
PLUS WE STILL HAVE A FEW BOEING B52D KITS AT THE REDUCED PRICE OF £6.00. PLEASE ADD 32p POSTAGE TO THIS KIT			
EIDAI			
Aerosabaru FA200 .....		V35B Bonanza .....	
Super Skymaster .....		Skyhawk .....	
Only 28p each or 27p if all six kits ordered together all 1/72.			
FUJIMI			
Northrop F5B .....	90p	Northrop F5A .....	90p
Mirage 111C .....	£1.15	Skyhawk A4E .....	90p
Intruder AGA .....	£2.10	F4E Phantom .....	£2.70
FW190D .....	£1.10	Alouette 11 .....	95p
UH1D Huey .....	95p		
Grumman Hawkeye in 1/72 scale .....	£1.40		
LIFELIKE (PYRO)			
1911 Boxkite .....	80p	1911 Triplane .....	80p
		Hawker Fury .....	80p
		Bristol Bulldog .....	80p
CONTRAIL			
1/72 vac-form kits with excellent drawings and construction plans.			
Welkin .....	75p	Bombay .....	£1.05
JU390 .....	£1.70	Harrow .....	95p
Hendon .....	£1.10	Lincoln .....	£1.28
Overstrand .....	95p	WACO CG4 .....	95p
Horsa .....	85p	Coronado .....	£1.45
Plus the latest flying boats			
Stranraer .....	£1.45	London .....	£1.45
Iris .....	£1.65	Southampton .....	£1.45
BARG BOOKS			
AEW Skyraider .....	£1.40		
Wyvern .....	£1.00		
Superb books, with excellent photographs and colour details.			
DATA PLAN			
Hawker WOODCOCK monograph .....	75p		
Bristol BULLDOG monograph .....	75p		
Short STIRLING monograph .....	80p		
POST FREE IF ALL THREE ORDERED			

GREEN STUFF	
America's renowned body putty. Will not crack, crumble or shrink and dries within 30 minutes to a hard surface ready for filing. 50p per tube.	
RUB 'N' BUFF	
The time-honoured metallic finish for all surfaces. A large tube will finish twenty or so 1/72 scale aircraft. 70p	
NEEDLE FILES	
Finest British needle files with clog free cutting pattern. Sets of 4 shapes: Flat, Half Round, Triangle, Oval. Only £1.20	
MIG 15	
The Mig 15 in 1/32 scale complete with Micro Scale decals. This vac-form in 1/32 scale is really superb. Contents include all parts required to complete a first class model with 1/32 size drawings, multi-page illustrated instruction sheet and Russian and North Korean decals by Micro Scale. Only a few of these have been made. Only £4.50	
ARALDITE RAPID	
Ideal for vac form kits. One of the world's toughest adhesives. Sets in 30 minutes. 40p per set	
PLASTICARD	
Budget price sets containing one sheet each of 10, 15, 20, 30 and 40 thou white plasticard. Only 45p. Clear sheet. 20p or six for £1.00.	
LIQU-A-PLATE	
The best metallic finish available in the world. Only to be used with Airbrush. Five colours: Aluminium, Bronze, Titanium, Dark Anodic Gray and Sealer. 75p per jar	
SCALPELS	
Disposable surgical scalpels. 11p each	
QUICKSAND	
A foam lined sanding block with its four faces covered with fine and medium grades. Can be washed out and used over and over again. Ideal for sanding the edges of vac-forms. Only 30p	
POSTAL CHARGES (UK)	
Orders up to £1 .....	15p
Over £1 up to £2 .....	25p
Over £2 up to £3 .....	30p
Over £3 up to £4 .....	40p
Over £4 up to £6 .....	45p
Over £6 .....	Post Free
Goods are offered at prices ruling on date of order and subject to availability. S.A.E. with all enquiries please.	
OVERSEAS — Send 2 Postal Reply Coupons for pro-forma invoice of goods and postal charges.	
HUMBROL GLUE	
Buy your glue in bulk. Six tubes of Humbrol polystyrene cement cost only 50p from us, plus postage.	
PLASTIC ROD AND STRIP SETS	
1 mm white rod packs .....	17p
75 mm white rod packs .....	17p
5 mm x 1 mm strip pack .....	28p
5 mm x 1.5 mm strip pack .....	28p
DULL RED CODES	
We still have a limited quantity of the De-Frey Bomber Command red code decals at the special price of only 25p post free for two.	

AIRMODEL			
138 Vought Flapjack .....	70p	160 SBC Helldiver .....	95p
154 F3D Skyknight .....	£1.00	175 B6 Destroyer .....	£1.70
206 C123 Provider .....	£3.30	151 Convair Pogo .....	95p
192 Heinkel HE46 .....	£1.00	161 AJ1 Savage .....	£2.35
173 N.A. T28 Trojan .....	75p	152 Lockheed U2 .....	£1.00
168 Pembroke .....	£1.25	155 BV155 Wiking .....	£4.00
200 TA154 Mosquito .....	£1.40	156 Cutlass .....	£1.00
202 Demon .....	£1.00	164 Mauler .....	95p
205 Tracer .....	£1.70	162 Jetstar .....	£1.20
183 Sea Dart .....	£1.20	182 JU287 .....	£2.35
159 Valetta .....	£1.25	140 ME321/3 .....	£4.00
198 Banshee .....	£1.00	203 Cougar .....	£1.00
AIRFRAME			
DFS230A .....	£1.00	Henschel HS132 .....	80p
Bell XP77 .....	80p	Baka Bomb .....	50p
Natter .....	80p	DH108 .....	80p
Skyrocket XF5 .....	£1.00	Grumman XP50 .....	£1.50
Provost .....	90p	Pterodactyl .....	90p
Bristol M1C .....	90p	Bv HA139 .....	£2.00
REPLICA IN SCALE			
We still have a few copies remaining of the last issue, which was a combined issue numbered volume 2 nos 3/4 at £1.00. A few back issues are in stock, a S.A.E. will bring details. Subscriptions for Volume 3 are now being taken at only £2.20 for a year.			
BOOKS			
Skyraider by B.A.R.G. ....	£1.40	P40 Kittyhawk in Service .....	£3.00
Wyvern by B.A.R.G. ....	£1.00	JU288 Close Up .....	£1.85
Venom/Sea Venom .....	85p	Airbrushing for Modellers .....	£1.50
Stuka .....	£1.25	Short Stirling .....	80p
Camouflage & Markings RAF Fighter Command Europe 1939-1945 .....	£4.50	Bristle Bulldog .....	75p
Camouflage & Markings USAF Europe 1937-1945 .....	£4.50	Danecock/Woodcock .....	75p
Wheeled Vehicles of The Wehrmacht .....	£3.60	Aircraft Model Special .....	£1.25
Airfix Plastic Modelling .....	£1.00	Airfix Aircraft Modelling .....	£1.00
Airfix Military Modelling .....	£1.20	Insignia of the 3rd Reich .....	£2.00
		JU287 Close Up .....	£1.85
		Anson special price .....	60p
AIR ENTHUSIAST QUARTERLY			
The first issue of this superb magazine is due in June. Each issue will be packed with 112 pages of original articles, with full colour photographs and drawings as well as a host of black and white photos. All aspects of aircraft will be covered, both current and wartime. Each issue costs £1.25 plus 8p post or try a yearly subscription for £5.00 post free. The print number is extremely limited and reprints will not be made so make sure of your copy.			
AIR CONVERSION		1/48 SCALE B17	
<b>1/72 Scale Injection moulded parts</b>		The fabulous Monogram 1/48 B17 should be available during the early part of June, but only a few will be initially in the shops. The price will be £7.45 and as a special offer we are taking advance orders at the special low price of £5.50 plus postage of 54p.	
1 Hunter T7 canopy, nose and spine .....	55p		
2 Harrier T2, canopy, nose and tail .....	60p		
3 RF4 Phantom nose unit .....	60p		
4 Sea King radome and windows .....	20p		
5 Mosquito/Beaufighter noses .....	20p		
6 Canberra TT pointed nose .....	40p		
7 HH3F pelican radome and windows .....	30p		
AIRBRUSHES		SPECIAL FROG OFFER	
Set 1 250 brush, 2 jars, connector .....	£5.65	Gypsy Moth, Supermarine S6B, Kittyhawk, Fokker D21, Typhoon .....	all 19p
Set 2 250 brush, 5 jars, connector and power pack .....	£7.00	Gladiator and Bf109 .....	all 30p
Set 3 200 brush, 4 jars, connector and power pack .....	£21.50	Swordfish, Gannet, Barracuda, Wessex, Jaguar, Mitchell, Maryland .....	all 40p
Set 4 100XF brush and colour cup .....	£25.00	Spitfire Mk 8 .....	30p
Badger Compressor .....	£38.00 post free	Heinkel HE111 .....	85p
Air Regulator .....	£3.00	All of the above are boxed with decals.	
20 oz. Air Can .....	£1.40	Harrier, A7 Corsair, F100, Lightning, Mohawk, Viggen, Mig 21 .....	all 45p
6 ft. Air Hose .....	£1.80	All of the above are bagged kits only.	
10 ft. Air Hose .....	£2.35		
Gaskets .....	26p		
Jar .....	20p		
DIORAMA KITS AND ACCESSORIES			
FUJIMI SETS 1/72 Scale			
Set D1 .....	German Infantry	Set D2 .....	88 mm Flak 18
Set D3 .....	American Infantry	Set D4 .....	Tents, Bridges, Debris etc.
Set D5 .....	Pill Box, Watch Tower	Set D6 .....	German Infantry with gas masks
Set D7 .....	British Infantry		Price 60p each
MODAKIT 1/72 Scale			
<b>Vac-Form Airfield Buildings</b>			
B01 .....	Nissen Hut .....	35p	
B03 .....	Blister Hangar .....	£1.05	
B02 .....	Control Tower .....	78p	
MP1 .....	Canvas and Plank Textured Plasticard .....	40p	
PREISER 1/72 Scale			
A set of Luftwaffe ground and flying crew, in all poses and wearing both tropical and temperate uniforms, complete with pet dog, oil drum and deck chair plus full painting guide. Thirty figures in all. 60p each			
HORIZON		FROM CANADA	
MIG 15 .....		1/32Scale	
Complete kit plus sheet of Micro Scale decals .....		£4.50	
Fi 103 .....		Complete kit of the manned V1 rocket .....	
		£2.00	

NEW FROM SIGNAL	
Thunderbolt In Action .....	£1.50
Panther In Action .....	£1.50
And Kill Migs .....	£3.50
WEATHERING SETS	
Floquil weathering sets give the ultimate in realism. Each set contains Mud, Dust, Grime, Rust, Grimy Black and thinners. Only £1.50 per set plus postage.	
WILLIAMS BROS	
We have very limited stocks of the Boeing 247D and the Martin B10 kits in 1/72. The price of each is £2.75 plus postage.	
RAREPLANES	
Jet Ranger .....	60p
Airacuda .....	£1.35
Sentinel .....	75p
Rapide DH89 .....	£1.35
MICRO PRODUCTS	
Micro Flat, Micro Gloss, Micro Set, Micro Sol, Micro Weld, Micro Thinners .....	
The world's best system for the application of decals. Full instructions on bottles.	
45p each	
K.P. KITS	
Mig 19 .....	60p
Letov S328 .....	60p
Avia B33 .....	60p
Avia B534 .....	55p
Mig 17 .....	60p
LA7 .....	60p
Delphin .....	55p
BANDAI KITS	
All in 1/48 Scale, with full interior detail and crew. Aerosabaru FA200, Cessna 150L, Super Cub, Cherokee 140. All at 95p each.	
SPECIAL OFFERS	
Frog Emily .....	£1.90
B47E Bagged .....	£1.75
Tamiya McLaren .....	£4.50
SIGNAL BOOKS	
Superb reference books with many rare photos. All at £1.50 each.	
Luftwaffe In Action numbers 1, 2, 3 and 4, Luftwaffe Bombers, New Luftwaffe In Action, Skyhawk, Delta Dart, Phantom, Super Sabre, Flying Fortress, Crusader, Thunderchief.	
Waffen SS, German Infantry, German Paratroopers, Tiger I, Panzer III, British Armour, German Half tracks etc.	
BOOKS FROM PSL	
Spitfire .....	£1.80
ME B1 109 .....	£1.60
Bombing Colours 1914-1937 .....	£2.40
Bombing Colours 1937-1973 .....	£3.80
Model Trucks .....	£4.95
Plastic Modelling .....	£1.00
Aircraft Modelling .....	£1.00
MONOGRAM CLOSE UPS	
A new range of highly detailed aircraft profiles from the Monogram Aviation Publishers of the USA. Each title has at least 100 photos, colour spreads and all details needed for the modeller. The 1st three titles will soon be here at £1.85 each plus postage or all three post free.	
(1) JU287	(2) JU288



# make model kit painting easier

Revell's new range of enamels is ideal for all types of plastic modelling.

There are 24 of them. 12 gloss, 11 matt and a thinner, packed in tough, screw-top bottles. They're smooth-flowing, fast-drying and non-toxic. And fully mixable. That's important because from those 23 basic paints you can make literally any colour you need.

That's the Revell enamels colour scheme - a range of paints that cover the whole spectrum of plastic model painting. And to help start you off Revell have produced an easy to follow mixing chart\*, giving directions for mixing a further 16 colours. The latest Revell kits contain extra-detailed painting and mixing instructions too.

Revell Enamels are easy to buy. You just can't miss the colourful Revell Enamels dispensers in all the best model shops. Easy to find, easy to use and fully mixable - that's the Revell Enamels range. Great for plastic modelling and great to have around the home too - for wood, glass, metal and ceramics.

\*The Revell Enamels Painting/Mixing Guide is available from model stores or direct from us, and is also included in the Revell 1975/6 enthusiast model 48 page colour catalogue, available from your model shop or send 30p to:-

The World's largest manufacturers of plastic model kits.



Revell (GB) Limited,  
Cranborne Road, Potters Bar,  
Herts. EN6 3JX  
Tel: Potters Bar 58261

## The Revell Enamels Colour Scheme



## The First Time Ever

Something completely new and exciting for modellers and military enthusiasts.

Full size (34 inches long) replica of German 88 mm. Armour piercing ammunition as used in the famous FLAK 18-36-37 ANTI-AIRCRAFT GUNS and in the powerful TIGER I TANK, in heavy gauge plastic assembly kit form.

These easy to make kits are produced from moulds cast from the actual round of ammunition and are completely authentic in finish. Fully illustrated and informative leaflet included.

**Lemarka Kit Number 1** — The first in a series of full size replica rounds of ammunition fired in famous artillery weapons.

Price: £3.95 (including VAT) plus 35p P.&P.

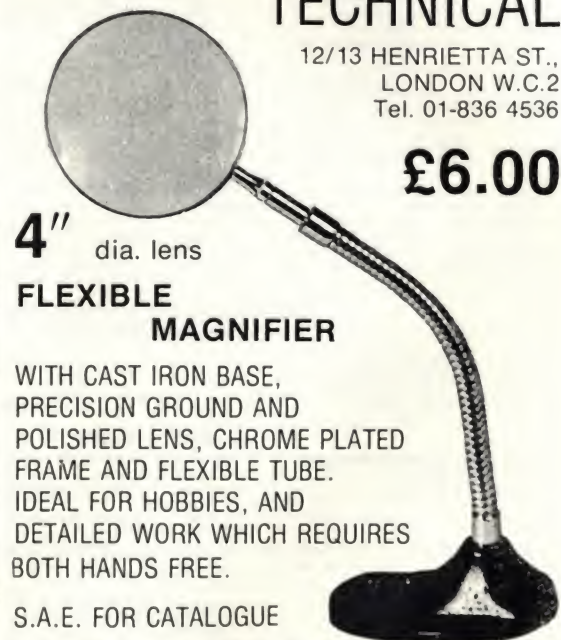
(Mail order only)

**LEMARKA REPRODUCTIONS**

Box No. P.O. 116  
155a Castle Road, Bedford MK40 3RT

## REVOR OPTICAL & TECHNICAL

12/13 HENRIETTA ST.,  
LONDON W.C.2  
Tel. 01-836 4536



£6.00

4" dia. lens  
**FLEXIBLE  
MAGNIFIER**

WITH CAST IRON BASE,  
PRECISION GROUND AND  
POLISHED LENS, CHROME PLATED  
FRAME AND FLEXIBLE TUBE.  
IDEAL FOR HOBBIES, AND  
DETAILED WORK WHICH REQUIRES  
BOTH HANDS FREE.

S.A.E. FOR CATALOGUE

(Subject to price ruling at the time of issue)

AIRFIX magazine

# BEATTIES NEWS

LIVERPOOL'S  
NEW  
MODEL SHOP  
NOW OPEN.  
AT ST. JOHN'S CENTRE.

## BEATTIES

EUROPE'S LEADING MODEL SHOPS

Mail Order Department: 10 The Broadway Southgate London N14 6PN

Retail Branches

112 High Holborn London WC1V 6JS 01-405 6285/8592  
10 The Broadway Southgate London N14 6PN 01-886 4258  
363 Lewisham High Street London SE13 6NZ 01-690 5885  
14 Spring Gardens Manchester M2 1EE 061-834 0229  
16/18 King Charles Street Leeds LS1 6LT 0532-456611  
3 Mount Street Nottingham NG1 6JW 0602-411693  
26 South Mall Birmingham Shopping Centre Birmingham B2 4XD 021-643 8604  
36/37 DAWSON WAY ST. JOHN'S CENTRE LIVERPOOL 051-7090799



## JONES BROS. OF CHISWICK

MAIL ORDER SPECIALISTS

### OUR NEW '75' KIT CATALOGUE 40p

**FROG KITS** — Full range as issued  
in stock including:  
Do 335 — Javelin — Vimy — JU88  
List as per our catalogue

**MATCHBOX** — Humber Armoured Car — 30p  
ME 262 — 30p

Catalogue — Post Paid

Airfix 33p; Revell 30p; Bandai 45p

Postage — 10% of order (minimum 15p) up to £5  
Over £5 post free. U.K. only

56-62 Turnham Green Terrace, Chiswick,  
Tel. 01-994 0858 LONDON, W4 Est. 1911

Closed all-day Thursday

## HEROICS FIGURES NEW HELICOPTER GUNSHIPS

In 1/300 Scale

Latest Russian Gunship and Assault Helicopter, Mil  
Mi-24 (Hind), and the US Huey Cobra. 15p each. Fine  
detailed metal castings.

Send sae for full lists of modern micro-tanks and aircraft, and our unique  
1/300 micro-people: accurate 1/300 scale figurines — Napoleonic  
Ancient, ACW, WW2 and Modern. 20p brings list and sample figurines.

Overseas trade invited

### HEROICS FIGURES

22 MOWBRAY COURT, MOWBRAY ROAD, LONDON SE19 2RL

# aviation books galore!

History — Reference  
Modelling — Engineering  
Computers — Navigation  
Flying — Construction

We carry a comprehensive U.K.  
and International range of  
books on all aspects of aviation  
and armour.

Send 12p for list. Refunded  
on orders of £2.50 or more.  
Personal callers welcome.

Tel: 01-836 5376

Motor Books & Accessories 33 (AM) St. Martin's Ct., London WC2

### FROG KITS

Spitfire Mk. 8 or 9 45p  
Mustang P51A 45p  
Heinkel HE162 45p  
Hunter FGA9 55p  
Swordfish Mk 1 55p  
Sea Venom Mk. 21  
or 53 55p

Dornier 335 A6 or 12 65p  
Gloster Javelin FAW9 or 9R 75p  
ME 110G 65p

### NEW BOOK

de Havilland Venom by Rodger Lindsay £1.05

**Expo Drills:** (Require 12v D.C. power or batteries)

Drill, Saw, Grind, Polish, Burr, Buff

Reliant Mini Drill Kit £9.89

(including 20 assorted tools)

12v Mains Power Unit £9.04

Drill Stand with adaptor collar £9.31

Rub 'n' Buff  
**PEARL BLUE  
SILVER, GOLD  
COPPER  
SPECIAL OFFER  
65p each**

## BADGER AIR BRUSHES

Model	List Price	My Price	Price includes
250-1	£5.46	£4.80	Hose valve & 2 jars
200 EX	£20.04	£16.20	Hose, valve & 1 jar
100 XF/IL	£28.84	£24.65	Spare needle
100 GXF	£29.92	£25.80	Spare needle
Compressor	£44.25	£35.25	1/4" thread adaptor

V.A.T. included: Air brushes and compressor post free,  
but please add 10% (min. 15p) to cover postage on all  
orders under £5.00.

Send S.A.E. for Complete Stock List

Tyre adaptor	92p	Spare jars	21p
20 oz. propellant	£1.19	6 ft. air hose	£1.83
On/off valve	£1.21	10 ft air hose	£2.33
Foot Switch	£3.24	Most spares in stock.	

## JOHN L. SILVESTER

51 THE PAVEMENT, PARK HILL,  
SHEFFIELD S2 5RD Tel. 0742 23897

# PETITE PRECISION

a power tool for the modeller

Now  
obtainable at

Victor's Hobbies  
Johannesburg S.A.

Seagull Models  
Kensington

Michael's Models  
N. Finchley

Evingtons  
Alexander Road,  
Grimsby

City Models & Toys  
Elliott Street,  
Liverpool 1

F. Knight & Son  
Bath Street  
Abingdon, Oxon.

Aircraft Ltd.  
Chatterton Road  
Bromley, Kent



Diameter:  
33 mm.  
Weight: 160 kg.  
Length:  
125 mm.  
Torque:  
105 cmg.  
Chuck size:  
2/10 to  
2.5 mm.

POWER  
9-14v. d.c.  
2 batteries  
4.5v. in series  
AC/DC Trans.  
Car battery

### THIS PRECISION EXAMPLE OF FRENCH ENGINEERING IS A MUST!

The high power "palm" size drill operates from 2 x 4.5v batteries or any DC source (a model train transformer for example) up to 14v, so is equally suitable for "field" or "workshop" use.

Supplied in a strong carrying and storage case, the complete outfit consists of drill with three collets battery holder, five assorted drills, seven assorted burs, three routers, six grinding stones and seven assorted polishing discs and brushes.

The drill may be hand-held for routing, engraving, polishing, cutting and so on or clamped in the special drill stand — an optional extra, but for which space is provided in the carrying case — for precision drilling, etc.

#### PRICES

Complete SUPER-30 kit as illustrated (less batteries, 30  
tools) £14.00 p.p. 50p  
Mk. II Drill Stand £3.50 p.p. 40p  
Drill only £6.65 p.p. 25p

#### NEW!!!

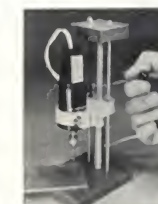
SUPER-10 kit in 9 1/2 x 2 1/4 in. case with Drill, Battery holder, 3  
collets, 10 tools £10.85 p.p. 40p  
Suitable transformer supplied on request £5.36 Carr. paid  
Flexible drive shaft £4.80 p.p. 25p

All above prices include VAT

1. Selection of tools in Super 30 kit.



2. Drill shown in  
stand.



3. Flexible drive approx. 16 in. long  
with collets.



4. Complete 30 tool kit in case  
showing space for stand.



Sole Distributors:

**PRECISION PETITE LTD.**, 119a High Street, Teddington, Middlesex, TW11 8HG

Send SAE for illustrated leaflet and order form

Tel: 01-977 0878





## TOP FLIGHT MODELLERS . . . USE TOP FLIGHT FINISHES

### 'JOY' LUMINOUS PAINT : 'JOY' New formula PLASTIC ENAMEL

(Green shade only).

See in the dark outfits, containing Base Reflecting Coat and Luminous Top Coat.



The 18 beautiful contemporary colours, including black and white, can be intermixed to provide a wide range of colours, Joy Plastic Enamel has a good flow, and is resistant to heat and most fuels. It gives glass-hard abrasion and wear resisting surface.

All colours are lead free and are safe to use on children's toys, etc.



### 'JOY-PLANE' BALSA CEMENT



New and improved quality. Very quick and hard setting. Penetrates deeply and is heat resisting and fuel proof.

In tubes.



### 'JOY-PLANE' POLYSTYRENE CEMENT



Non-stringing, quick-drying and colourless. The perfect adhesive for giving a weld joint to most polystyrene surfaces.

In tubes.

### OTHER PRODUCTS MADE BY MODELLERS FOR MODELLERS

'JOY-PLANE' CELLULOSE DOPES.  
'JOY-PLANE' CLEAR DOPES.  
PLASTIC WOOD.  
BANANA OIL. No. 1. Thick. No. 2. Thin.  
TISSUE PASTE. Tubes.

**JOY** is the registered trade mark of

**TURNBRIDGES LIMITED, LONDON, S.W.17**

manufacturers of quality products for  
STICKING, STAINING, POLISHING, PAINTING

AIRFIX magazine

# AIRFIX magazine

May 1975  
Volume 16 Number 9

## FOR PLASTIC MODELLERS

Editorial offices  
Bar Hill  
Cambridge CB3 8EL  
Tel Crafts Hill 80010

Editorial Director Darryl Reach  
Editor Bruce Quarrie  
Art Editor Ian Heath

### Cover Picture

The Imperial War Museum's preserved P-51D Mustang WZ-1 472258 on display at Duxford, photographed by Neville Franklin. One of the most colourful of a colourful breed, this aircraft would make an attractive model using Airfix's new 1:72 scale kit (or even in 1:24 scale). This would not be as difficult as it might sound because Ren-Models of 63 Fitzroy Street, Cambridge, can supply sets of Aviation Historical Associates' transfers for this machine at 56p plus 12p postage. This sheet is a real bargain, because it also contains markings for another colourful Mustang, 'Jersey Jerk'.

### Missing but not lost

We apologise for the absence from this issue of our two regular features, 'In the field' and 'Return from Balaclava', dictated by circumstances beyond our control. Both will definitely be back next month, however.

### Contents

In the air	helicopter operations to the North Sea rigs described by Peter F. Guiver	514
Spanish line grenadier	another Peninsular War figure conversion from Martin Windrow and Gerry Embleton	520
Napoleonic wargaming	hints for solo players by Bruce Quarrie	521
Squadron codes and colours	by Michael J. F. Bowyer and John D. R. Rawlings	522
British army uniforms	20th Foot 1749 by Bryan Fosten	524
Fictional figures	modelling characters from books by Ron Wood	526
Re-arranging the Avenger	TBM-3 conversions by Alan W. Hall	529
Scratch-building large scale tanks	finishing the Cruiser Mk IVa described by Jeremy Broughton	536
Army-air colours	part 6 — Armstrong Whitworth Atlas by Bruce Robertson	541
Renaissance warfare	final instalment: the English Civil War by George Gush	544
New kits and models	reviewed by modellers for modellers	549
News for the wargamer	books and games recently received	552
Book reviews	new publications of interest to modellers	553
Letters to the editor	your chance to win a free Airfix kit	555

**Advertisement Representatives**  
Jackson-Rudd and Associates Limited  
Oldebourne House,  
46/47 Chancery Lane, London WC2A 1JB  
Tel 01-405 3611  
**Advertisement Manager**  
S. C. Sullivan

**Circulation Department**  
Surridge Dawson and Company  
(Productions) Ltd, Publishing  
Department, 136/142 New Kent Road  
London SE1  
Tel 01-703 5480

© All articles and illustrations published in AIRFIX MAGAZINE are strictly copyright and may not be reproduced without written permission from the Publishers. The Editor welcomes the submission of editorial material, which should be accompanied by return postage. Though every care is taken, the publishers cannot accept responsibility for safe keeping of editorial contributions.

Airfix Magazine is published for the proprietors, Airfix Products Limited, by PSL Publications Limited, on the fourth Friday of each month. Annual subscription rate £3.40 (USA \$8.75) from Surridge Dawson & Company (Productions) Limited. Second Class postage paid at New York Post Office, NY.



MEMBER OF THE AUDIT  
BUREAU OF CIRCULATIONS

May 1975





Peter F. Guiver

## in the air

### North Sea rig helicopter operations

WITH THE ENERGY Crisis so much in the headlines of late, it is important to remember that the search for North Sea oil has now been under way for over ten years.

As the number of drilling rigs and other installations have multiplied over the years, so has the need for speedy and efficient supply and support services, and this has meant a major growth in the scale of helicopter operations in the North and East of Britain.

Fixed-wing aviation has also increased significantly in this area, with many operators of varying sizes now involved in supporting the oil and natural gas programmes. Many types of aircraft are involved, ranging from the ubiquitous Dakota carrying freight and spares to the sleek business jets conveying oil company executives.

Amongst several helicopter operators now active in the North Sea area, the major British undertakings are Bristow Helicopters,

whose main headquarters and engineering base is at Redhill Aerodrome, Surrey, and British Airways Helicopters who have a similar facility at London (Gatwick) Airport.

However, with the concentration of several rigs in the North Sea between the North of Scotland and Southern Norway, all needing support flights, both Bristows and BAH have set up new bases at Aberdeen and Sumburgh in the Shetland Islands, with each of these bases having full maintenance facilities.

Each of these operators have their own separate hangars at these bases, and a healthy competition exists between the two companies. Bristows have similar bases at Great Yarmouth and Paull, near Hull and, when necessary, additional operations are flown from other locations on the East coast, such as Tees-side. BAH also have a base at Beccles, near Lowestoft, and these installations on the East coast are used mainly to support the rigs involved in obtaining natural gas deposits, which are concentrated in the southern North Sea, to the north-east of the Wash.

With the search for oil now spreading to the Celtic Sea, Bristows have used Blackpool, Haverfordwest, Pembroke Dock and Cork in Ireland as bases to support the rigs in this new area, and British Airways Helicopters will be operating in the Celtic Sea from late 1975, using Haverfordwest or Swansea.

A variety of helicopter types are used on offshore services, and the largest both in terms of size and numbers operated is the Sikorsky S-61N. Bristows (who are the largest helicopter operators supporting the UK offshore energy programmes) have 14 of these aircraft, whilst BAH employ nine S-61s, with three more on order.

Used mainly on long range operations, the S-61 is powered by two General Electric T58 turbines, each of 1,500 shp, and can carry up to 26 passengers at a cruising speed of 224 kph/139 mph. External loads of up to 3,628 kg/8,000 lb may also be carried. The BAH aircraft are normally laid out to carry 16 passengers, with an area for freight. The new British Airways livery is now appearing on the BAH S-61s; three aircraft have so far been repainted, and this work is done at the operating base.

Another type used by both Bristows and BAH is the Sikorsky S-58T, which is a major rebuild of some ex-West German Army H-34s, a small batch of which were obtained in early 1974. This extensive conversion programme is under way by each company at both Redhill and Gatwick, and involves replacing the original piston engines with two Pratt and Whitney PT6T-6 'twin-pac' turbines producing 1,800 total shp.

This power plant consists of two turbine engines coupled to a combining gearbox with a single output shaft. The conversion is being carried out with a retrofit kit supplied by Sikorsky, and involves a complete

**Left** a Sikorsky S-61N of Bristow Helicopters prepares to land on an oil rig in the North Sea (Sikorsky Aircraft).



rebuild of the nose section to incorporate the new engines together with a new air intake. The airframes are also being extensively refurbished, and new avionics will be added to permit operations under instrument flight conditions. However, this programme has been somewhat delayed owing to the late delivery of the new engines.

The S-58T is employed on medium range support flights, and in addition to a crew of two can carry 16 passengers, or lift an external load of up to 2,539 kg/5,600 lb, at a cruising speed of 204 kph/127 mph, with a maximum range of 482 km/300 miles.

Other types in use include the Westland Wessex 60, which Bristows have been operating for nearly ten years, with five currently in service. Used on medium range work, the Wessex is capable of carrying 16 passengers, power coming from two Rolls-Royce Gnome turbines of 1,350 shp each.

BAH also have in use at Beccles a Bell 212, a 14 seat medium range helicopter which is powered by two 1,800 total shp Pratt and Whitney PT6T-3 coupled turbines. This aircraft is a development of the famous series of Bell UH-1 helicopters, which have been used in many hundreds by the US Army and other military services.

All the above types of helicopter carry a comprehensive range of sophisticated navigational equipment, which is essential in the North Sea area with its severe and unpredictable changes in weather.

Helicopters have been involved in some major rescue operations, and the complete crews of rigs have been airlifted to safety at short notice. In one such mission in 1974, S-61Ns of BAH evacuated some 70 men in the teeth of a 112 kph/70 mph gale.

Some of the BAH S-61s are fitted with winches to enable them to carry out rescue operations under a contract with HM Coastguard. These rescue flights are in addition to the oil rig support services, and provide a long range rescue capability, to supplement the shorter range Whirlwinds of the RAF. The Wessex, S-58T and the Bell 212 are fitted with flotation gear for use in an emergency; the S-61 is capable of water landings, having a boat type hull.

**Continued on page 518**



**Top** a Bermudan-registered S-61 of Bristows on board a rig (Bristow Helicopters via Malcolm Pendrill Ltd). **Centre** two H-34s at Gatwick being transformed into Sikorsky S-58Ts for British Airways Helicopters. The nearer machine has the old piston engine removed in readiness to receive the new nose styling and turbine engine. **Above** nose detail of S-58T. The light coloured areas are the new nose and air intake supplied as part of the conversion kit by Sikorsky and are in yellow primer.



AIRFIX NEW MODELS FILE

NEW SERIES  
AMERICAN CAR CLASSICS

American Car Classics is a completely new series from Airfix. It starts with a car from the Lincoln Motor Company.

The Lincoln Motor Company was founded in 1917 by Henry M. Leland and was named after his hero - Abraham Lincoln.

Initially, the company made aero engines but when the First World War ended production turned to motor cars.

The first Lincoln car appeared in 1920 and was a luxury V-8 model. Henry Leland believed that the motor car should have six important attributes: trustworthiness, long life, power, economy, good appearance and comfort.

The company introduced further styles with the help of specialist body builders including Judkins, Fleetwood and Brunn.

On February 4, 1922, the Lincoln Motor Company passed to Henry Ford for \$8,000,000. From 1922 until 1927 few changes were made to the original Model L Lincoln.

The Airfix Lincoln is a roadster of 1927 and is a generously detailed replica. It contains 145 parts and details including moveable wheels and steering operated from

the steering wheel. The dicky seat opens, there's a side opening door and the bonnet opens to reveal a fully-detailed engine. There's an optional luggage rack and the top can open (for a convertible). The kit includes rubber tyres and chrome parts.

For up-to-date news and details of Airfix models get the Airfix magazine, price 22p.

Also available are a set of detailed Airfix Books. These give all the background information to such models as the HMS Victory, Cutty Sark, Mayflower, Spitfire, Messerschmitt Bf.109, P-51 Mustang and Hawker Hurricane.



1927 Lincoln Roadster 1/25th Scale.  
American Car Classics -  
new to the world's biggest range  
of construction kits.

Technical Details	
Date of Origin: 1922	
Engine:	385 cubic ins displacement V8. Rated at 90hp.
Top Speed:	90 mph.
Gears:	3 speed manual transmission
Wheel Base:	136½"
Track:	58"
Length:	201" + 12" if equipped with trunk
Height:	73½"
Body Type:	Roadster
M.P.G.:	in excess of 20 m.p.g. (U.S.)

1927 LINCOLN ROADSTER -  
HENRY FORD PAID \$8 MILLION TO OWN IT.



AIRFIX NEW MODELS FILE

SCOTTISH AVIATION  
BULLDOG

The Bulldog was originally designed by the now-liquidated Beagle Aircraft Company and was derived from the civil Pup club trainer. In 1970, Scottish Aviation took over the aircraft and developed it to production standards. The Bulldog is a two or three-seat primary trainer.

The first order came from the Swedish Army and Air Force for 78 Bulldogs. This was followed by 15 aircraft for the Royal Malaysian Air Force. And after evaluation, the RAF bought 130 Bulldogs to be used by 16 University Air Squadrons and the Central Flying School.

Other customers include Kenya who bought 5, Ghana 6, Nigeria 20, and Jordan 5, bringing the number of Bulldogs ordered to 260.

The Airfix Bulldog comes with a choice of markings and alternative parts making it either a Bulldog 101 of the Royal Swedish Air Force or a TMK1 of the

RAF Central Flying School. And as you'd expect, Airfix have paid every attention to detail.

For up-to-date news and details of Airfix models get the Airfix magazine, price 22p.

Also available are a set of detailed Airfix Books. These give the background information to such models as the HMS Victory, Cutty Sark, Mayflower, Spitfire, Messerschmitt Bf.109, P-51 Mustang and Hawker Hurricane.



Scottish Aviation Bulldog  
72nd Scale Series 1.

New to the world's biggest range  
of construction kits.

Technical Details	
Date of Origin: 1970	
Engine:	200 h.p. Lycoming IO-360 engine
Top Speed:	150 m.p.h.
Service Ceiling:	17,000 ft.
Range:	628 miles at 4,000 ft.
Wingspan:	33 ft.
Length:	23 ft. 2½ in.
Height:	7 ft. 5¼ in.

THE BEAGLE PUP THAT GREW INTO  
A SCOTTISH BULLDOG.







Continued from page 515

Some 30 rigs are now operating in the United Kingdom sectors, and with oil from the North Sea now starting to come ashore in quantity, and the search for new oil fields continuing apace, there will be many years of aviation activity assisting the production of energy for an ever-demanding world.

I would like to thank Bristow Helicopters and British Airways Helicopters for their help in the preparation of this article. □

**Top** S-61N G-AZDC of Bristow Helicopters in their standard colour scheme of blue top surfaces, red central band and white lower surfaces. **Narrow cheat lines and company name white, rotor hub, tail fin tip, registration and top of undercarriage pods/floats with struts all red. Right** newly converted S-58T G-BCRW in the same colour scheme. **Below** Wessex 60 G-ATBY (all photos Bristow Helicopters via Malcolm Pendrill Ltd).



# YOUR INTERNATIONAL MODEL MAIL ORDER HOUSE

Suppliers to the British and Overseas Governments



## UNIMAT UNIVERSAL MINIATURES

Unimat Universal Workshop £98.00  
Extra equipment: £3.85  
Drill chuck 1/2" £3.85  
Machine Vice 1 1/2" width of jaws £7.70  
1 Centre drill, 1 countersink, 2 grinding wheels, 2 gravers £11.66  
Tool bit case containing 6 assorted turning tools £8.50  
Milling table with 2 clamp £6.00  
Flexible shaft £16.00  
Thread cutting attachment £15.50  
Woodworking conversion set £7.40  
Set of 8 assorted milling and drilling tools £5.75

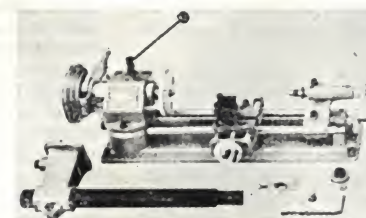
## WAR GAME RULES

Ancient 1000 BC to AD 1000. Now in third edition.  
1750-1850 for use with 20, 25 and 30mm figures, easily adapted for 12 1/2 and 15mm figures  
1925-1975 Infantry action. Based on the Infantry scale for 54mm figures  
1925-1950 Armour/Infantry. Has provisions for all aspects of tactical land action. For '20' figures and models  
Reference books  
Armies of the Macedonian & Punic Wars. Covers period 350-150 BC  
Armies & Enemies of Imperial Rome 150BC-AD600

## KING WHITE FIGURES

**German Figures**  
1 Infantryman, rifle slung  
2 Officer, peaked cap walking out dress  
3 Afrika Korps Infantryman, advancing, shorts  
4 Paratrooper, kneeling with small arms  
5 NCO Paratrooper, kneeling auto weapon  
6 Infantry Officer pointing  
7 Officer forage cap, pointing  
8 Afrika Korps Infantryman advancing  
9 N.C.O. at ease  
10 Afrika Korps Infantryman arm raised  
11 Afrika Korps Infantryman dispatch case  
12 Paratrooper at ease  
13 Paratrooper throwing grenade  
20 Paratrooper grenade stance  
**British Figures**  
15 Infantryman aiming Bren  
16 Infantryman steno gun kneeling  
17 Lieutenant small arms  
18 Infantryman steno gun standing  
19 Infantryman grenade stance  
46p each  
Further British and U.S. figures available shortly.

PRICES STATED in this advertisement are as accurate as possible as we write same, but, prices are rising so fast, we can only supply from present stock. New stock must, regrettably, be at prices current on delivery to us.



## LIQU-A-PLATE — NOW IN FIVE COLOURS!

1. Aluminium plate  
2. Dark Anodic Grey (or steel) to simulate dark anodized panels as on Boeing 247D airliner or steel parts of any model.  
3. Titanium. Matched to real panels of flying aircraft. For Models of F-100 Super Sabre, F-4E Phantom II, etc. rear section.  
4. Jet exhaust. Matched to real flying aircraft, a very dirty dark brown-brown-grey colour for jet aircraft  
5. Bronze. Matched to the shade of a new Bristol radial engine nose exhaust collection ring, such as on Beaufighter  
For use with sprays, Badger, etc. They may be left dull or polished to the degree of lustre required. They are interchangeable and in lars. After spraying and/or polishing the model can be sealed with a special sealer.  
LIQU-A-PLATE, state colour 70p  
SEALER per jar 70p

## B.M.W.—ALPHA 54mm DIORAMAS

A new range of diorama accessories, each sheet vacuum formed best quality white polystyrene sheet. 15 thou, each sheet approx 12" x 6" and 30p each except Sheet AA8 18" x 18" at 50p  
AA1 Paving stones  
AA2 Random cobble stones  
AA3 Stone walls  
AA4 Rocks and boulders  
AA5 Six bases 2" x 2" for 4 figures + rocks and boulders  
AA6 Four bases 4" x 2 1/2" for mounted figures + tree stumps and fallen tree  
AA7 2 bases for small dioramas  
AA9 Regular cobble stones with central gully  
AA10 Cobble stones with pavement and herbs  
AA11 Stone brickwork  
AA12 Windows  
AA13 Doors  
AA14 Modern brick  
AA15 Modern tile  
AA8 Country Lane, ideal for Historex Gun team or 1/35 scale armour 50p each

## GROWING MONEY CARDS

Our "growing money" cards are a super way to save for the more expensive models, birthdays and Christmas presents.  
YOUR MONEY GROWS AS YOU SAVE so very, very rapidly with B.M.W. Details gladly on request.  
**CARS & TRUCKS**  
OTAKI 1/12 scale £13.40  
Porsche 911 Turbo  
L & S Morgan Plus 8 1/16 scale £5.51  
A.M.T. 1/25 scale  
White Road £4.18  
Penske Eagle £1.85  
Penske McLaren £1.85  
Penske Matador £1.85  
Benny Parson's Laguna £1.85  
Johncock Chevelle £1.85  
Mustang G.T.  
TAMIYA  
TEXACO Marlborough 1/12 scale £5.55  
FLH 1200 Harley Davidson 1/6 scale £12.95

## NEW ERTL 1/25 CONSTRUCTION KITS

J.D. 4430 Tractor £3.08  
J.D. Wagon £1.85  
M.F. 1155 Tractor £3.23  
M.F. Wagon £1.85  
I.H. Plough £1.85  
J.D. Plough £1.85  
I.H. Paystar £8.95

## A.F.V. KITS

Hasegawa 1/72  
G.M.C. Personnel Carrier  
G.M.C. Gasoline Truck  
G.M.C. Dump Truck 37p each.  
BANDAI 1/15  
German Howitzer SP IV  
150mm Hummel £10.65  
Long Tom 1/48 £1.20  
T.34 Russian Tank £1.49  
NITTO 1/35  
German half track SdKfz 250/3 £1.58  
RIKO 1/76  
Hsinomag SdKfz 250/10 46p  
ITALAEREI 1/35  
Opel Blitz £1.62  
6 Figures Gross Deutschland 51p  
E.S.C.I. 1/72  
FzKplw 11 Ausf. F 51p  
105mm Wespe 51p  
Marder III 51p

## VAT

Please add 8% to all orders including cost of postage and packing except books

## POSTAGE:

Minimum Charge 25p  
Up to £1 45p  
£1-£2 45p  
£2-£3 60p  
£3-£4 75p  
£4-£10 90p  
£10-£15 £1.00  
Over £15 Free

## GUARDHOUSE FIGURES 54 mm

**THE ARMIES OF NAPOLEON**  
NAP 1 The Emperor Napoleon  
NAP 2 Old Guard Officer  
NAP 3 Old Guard Grenadier  
NAP 4 Guardsman—Horse Chasseurs  
NAP 5 Hussar Trooper (Elite Co.)  
NAP 6 Light Infantry Officer  
**THE ARMIES OF WELLINGTON**  
WEL 1 The Duke of Wellington  
WEL 2 Line Infantry Officer  
WEL 3 Line Infantry Private  
WEL 4 Highland Officer  
WEL 5 Highland Private  
WEL 6 Light Infantry Officer  
WEL 7 Light Infantry Private  
WEL 8 Rifle Brigade Officer  
WEL 9 Rifle Brigade Private  
WEL 10 Scots Greys Private  
**IN KIT FORM WITH FULL ASSEMBLY AND PAINTING GUIDE, EASY TO FOLLOW KNIGHTS OF THE MIDDLE AGES**  
KN 1 The Black Prince  
KN 2 The Dauphin of France  
KN 3 Nobleman in armour 1400  
KN 4 Knight in armour 1400  
KN 5 Knight in armour 1415  
KN 6 Knight in Transitional armour 1330  
KN 7 Knight in Crecy armour 1345  
KN 8 Knight in Italian armour 1465  
KN 9 Knight in Gothic armour 1480  
KN 10 Crusader in surcoat 1200  
KN 11 Knight in Helm 1250  
KN 12 Knight in Crested Helm 1285  
KN 13 French Crossbowman 1340-1440  
KN 14 French Foot Soldier 1340-1440  
KN 15 English Foot Soldier 1340-1440  
ALL 50p PER KIT

BMW MODELS, 327/329 HAYDONS ROAD, WIMBLEDON, LONDON, SW19 Telex 928374 01-540 7333/4



# Peninsular War figure conversions

This month, a Spanish Line Grenadier of 1813 from Martin Windrow and Gerry Embleton

THE SPANISH ARMY, such a shambles for so much of the war, began to improve in the last year or so of the campaign. Wellington had at last achieved a degree of control over Spanish military dispositions, and the liberation of a large part of the country combined with the freer flow of supplies from Britain to allow a measure of reorganisation. Some units were trained up to a more reliable standard, and most received new uniforms according to a standard pattern, manufactured in Britain and strongly reminiscent of the British cut.

It is thus quite easy to produce any 1813 Spanish line or light infantryman from Airfix parts, for a diorama of the Vittoria campaign perhaps. A group of Spanish and British soldiers of different units happily looting a treasure trove of French baggage would make an attractive scene!

For our single figure we chose a more conventional pose, however, to demonstrate the possibilities of mixing the optional legs and arms now available in the Airfix range.

The legs are from the Rifleman kit, the right kneeling and the left standing, joined

and 'faired together' with a tiny touch of putty and some slight trimming, to produce a running effect.

The torso is that of a Rifleman with the outer rows of buttons trimmed off, and the arms are from a Coldstream kit, with the cuffs trimmed off and the arms repositioned slightly. With a little imagination and some care endless variations of limb positions are possible with the available kits.

The shako worn by these troops was almost identical to the British 'stovepipe' pattern, so the Rifleman's can be adapted quite easily. The Spanish seem to have had leather peaks with a narrow brass edge-fillet. They wore a band of coloured braid around the base, and a pair of chin-tapes of

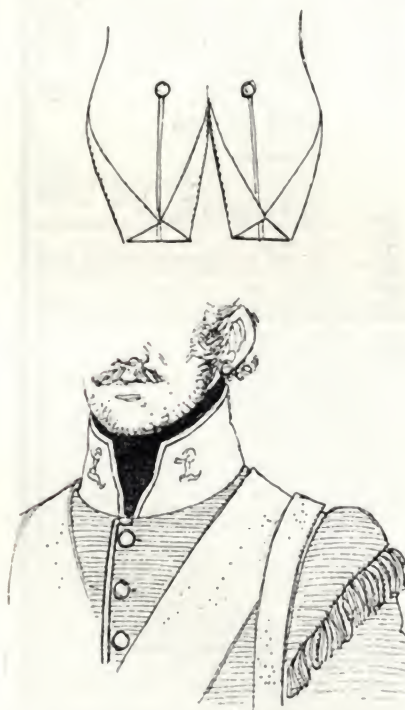
the same dimensions, which were often worn tied up over the top of the shako.

To simulate this, cut or file the surface detail from the cords on the Rifleman's shako to produce a flat tape effect. With a sharp blade cut inwards towards the tuft under the sections of this tape which run across the top of the shako, lifting slightly to produce the effect of a tied bow. Add the cockade as for the Rifleman, but not the buglehorn.

The shako furniture was as follows: **Centre or fusilier companies** — white tuft, red cockade, white bottom band and tapes, plate in shape of gold rampant lion facing left. **Grenadier company** — red tuft, braid, tapes, cockade; gold grenade-shaped plate. **Light company** — green tuft, braid and tapes, red cockade, gold buglehorn plate; this latter was larger than the 95th badge, of classic looped *cor-de-chasse* shape without strings.

Line infantry wore a coatee which can be made very easily from the Rifleman's torso. Remove the outer rows of buttons, as mentioned above, and file smooth the cuff detail on any arms you select, except those from the Rifleman kit which already have pointed cuffs. See accompanying sketches for tail and shoulder detail. Add the inner pair of turnbacks from plastic card.

**Right** finished model of a Spanish Line Infantry Grenadier, 1812-14. Note shoulder rolls added from Plasticine over the 'wings' from a Coldstream Guard kit. As on previous figures in this series, the crossbelts and pouch have been modelled in 'mid air' to give a vigorous air of movement to the figure. Note the 'tied bow' effect of the shaved-down cords behind the shako tuft. **Left** shoulder, collar and turnback details for a Spanish Line Infantryman of 1812-13 — colours as described in the text. A flank company roll is illustrated.



For a fusilier, cut shoulder straps from plastic card; these had three-pointed bastion-shaped outer ends. Flank company men wore a strap ending in a fat padded cloth roll on the point of the shoulder, with an outer fringe. We made ours by adding a roll of Plasticine (or you could use DAS, which hardens nicely) to the shoulder wings from a Coldstreamer kit, positioned to hide the wing but to expose the strap and fringe.

All companies wore dark blue coatees with red collars and cuffs, red turnbacks, and red piping down the front and around the bottom of the front. The shoulder straps were blue piped red, and two vertical lines of red piping ran down to the skirt from the rear buttons. All buttons were brass; nine on the front, two at the rear of each pointed cuff, and two each on the shoulders and the back. Grenadiers had red-fringed rolls, light infantry green-fringed rolls.

On each side of the collar appeared a brass monogram initial of the regimental title. We suggest 'L' for *Leon*; this regiment of Morillo's division fought bravely at Vittoria and in the Pass of Roncesvalles (historic ground indeed!) during the Pyrenees campaign. Also L is a nice easy letter to paint...

Trousers can be British grey, or a light azure blue; gaiters were grey, black or white, and boots black. Conventional white crossbelts supported a black cartridge pouch and a bayonet scabbard. Packs, if worn, can be tarred or painted black canvas British type, or the hide French type. A variety of blanket-rolls, British canteens, gourds or native wineskins can be strung around the figure to taste. Use either the Brown Bess from the Coldstream and Black Watch kits, or the French Imperial Guardsman's musket — differences really don't show at this scale.

We posed our Spaniard running through wet mud, and liberally splashed with same. This is an easy effect to achieve; simply press the feet of a scale figure several times into the putty or plaster 'ground' while it is wet, paint it dark brown or yellowish-grey, and coat with clear varnish when dry. The splashes on the trousers are applied in the same way, but be restrained with the clear varnish. Remember to add a few blobs of putty to the boots and ankles — mud clings to boots, believe you me!

If you want to make a diorama of Spanish and British figures in a group, the *Regt de Leon* fought alongside the 92nd (Gordon Highlanders) and the 1st/50th Foot at Vittoria. At Roncesvalles they fought with the 1st/3rd (Buff) and 1st/57th (Diehards) — exclusive company by any standards.

The article after next in this series deals with British line uniform of the period, but for those who can't wait the 50th, 3rd and 57th wore respectively black facings and paired square-ended loops; buff facings and paired square loops; and yellow facings with paired square loops.

Details of contemporary Spanish light infantry uniform are given in the caption to the accompanying photo. See also *Military Dress of the Peninsular War* under Fig 82, Plate 17, and Fig 90, Plate 18. □



Centre company private of Spanish Light Infantry, 1812-14. The shako details are as described for Line troops. The coatee and trousers are azure blue piped and lined white. Some contemporary sources show facings of solid white, others areas of ground colour piped white, as here. Note characteristic straight-cocked Spanish musket, and the miniature flask slung as a canteen.

## Napoleonic Wargaming

Playing tips for solo games by Bruce Quarrie

NOT ALL WARGAMERS, unfortunately, are lucky enough to have clubs or similarly minded friends in their locality. Play by mail is possible, though not usually satisfactory, and most people in this situation are forced to fight solo games. The big problem here, of course, is that you always know what your opponent intends. It is also very easy to begin favouring one side over the other and bending the rules to help them — even going so far sometimes as to throw an adverse die a second time in the hope of producing a better result!

This short article is therefore intended to help the many readers of my book, *Airfix Magazine Guide 4: Napoleonic Wargaming* (Patrick Stephens Ltd, £1.20) who do not possess a real-life opponent.

Achieving a balanced mixture of forces in the opposing armies is simple using the points system described here last month. Creating terrain which does not favour one side more than the other can only be achieved by being scrupulously honest with yourself, the problem here being that you usually end up with a very unrealistic table on which precisely the same features are duplicated on both halves of the playing area.

You can add variety by allocating a specific number of terrain features — say two hills, two houses and two woods — then mentally dividing your table into six squares, and throwing a die for each piece of terrain in turn. Whichever number comes up tells you where to place it on the table.

Obviously you don't put two identical features in the same 'square': if the die throw produces this result, throw again. But you could end up with one house, one wood and one hill all together in one square. Having finally settled your terrain, you allocate sides by the simple process of tossing a coin.

Laying down the troops in their opening dispositions is the next problem, one which wouldn't bother a computer but is difficult for a mere mortal, since no matter how impartial you try to be you do tend to favour one side over the other. On top of this, having made your plans for one force, and — presumably — having a pretty clear picture in mind of their objectives, it is difficult to position the second force impartially, ignoring your knowledge of the first army's intentions.

One solution which I have used with some success involves throwing a die for each unit and positioning it in — using the same system as for terrain features — whichever 'square' on each side of the table corresponds to the die score. This can lead to some really weird dispositions, however, and a compromise solution is to lay down



half of each army according to a plan and throw dice for the remaining units. This introduces at least a partial element of surprise and uncertainty into the beginning of the game.

The major problem with solo play though, as those of you who have tried it will realise all too well, is getting the same degree of surprise into the actual battle. What I do to achieve this is utilise a modified form of the Control rules, testing every unit at the beginning of every turn to see whether it obeys orders or not.

Taking the unit's basic control factor as laid down in the national characteristic tables, add or deduct points as follows, *plus* a throw of one average die and the leadership factor for the commander, if present.

For each enemy unit retiring within 300 yards +1; retreating +2; routing +4; standing -1; advancing -2; charging -4. Any enemy unit to own unit's flank or rear, add +1 to any of these. For each friendly unit retiring within 300 yards -1; retreating -2; routing -4; standing +1; advancing +2; charging +4. For each round of mêlée won by unit under test within last four Moves +1. For each Move within the last four in which the unit under test has been under fire (artillery or small arms) -1. Under fire from flank or rear -2. Unit is veteran + or -2 as required to give the best possible result.

Results: 2 or less — retreat for one Move; rally, then may not advance for two Moves; 3-4 — retire for one Move then may not advance for one Move; 5-6 — may not advance for two Moves; 7-8 — may not advance for one Move; 9-10 — carry out orders as planned; 11-12 advance if ordered to stand, charge if ordered to advance, for one Move; 13+ charge towards nearest enemy unit for two Moves.

Although this control system is somewhat unrealistic since most Napoleonic troops were reasonably well disciplined, it is about the only way (apart from using 'chance cards') of bringing an element of surprise into a solo wargame. Units ordered to hold a vital position may suddenly decide they're fed up with their assigned task and take it into their heads to charge the enemy; another unit ordered to charge may decide it doesn't like the look of the situation, and remain standing, or even retire; and so on.

Chance cards, drawn for each side at the beginning of each Move, or according to any other system you prefer to devise, can include such instructions as: 'Any friendly unit in a mêlée gets "blood lust" and adds +1 to its score'; 'Commander in Chief has stomach ache — no new order may be issued for two Moves'; 'All units under enemy fire deploy into line'; 'Any unit which has marched for three consecutive Moves is now "Tired"'; and so on. These cards can be as 'silly', or as carefully considered, as you like — a balance is probably best.

Obviously this short article can only skate over the surface of the possibilities open to solo wargamers, but I hope it will be helpful nonetheless. Next month I shall be dealing with some queries relating to skirmishers and mêlées which readers of my book have raised.

# squadron codes and colours 1939-1956



By Michael J. F. Bowyer and John D. R. Rawlings

**JU 111 Squadron (c)**  
Letters used from September 1939 until disbandment on May 12 1947. Used successively on Hurricanes, eg JU:K-L1823 used July-August 1940; Spitfire 1, II, VBs, eg JU:N-EP166; VCs, eg JU:N-EE810; IXCs (used June 1943 to May 1947), eg JU:V-MA538.

**JU 446th Bomb Group, USAAF (c)**  
When 111 Squadron went overseas the letters JU were freed for home use, and were carried on B-24s of the 707th Bomb Squadron over the period December 1943-July 1945.

**JV 6 Squadron (c)**  
Used September 1939 and almost continuously until 1946. First worn on Hardys, Gauntlets and Gladiators in Palestine, then Lysanders, Blenheims and Gladiators in the Western Desert from June 1940 then again in Palestine and most famously on the Hurricane IID tank-busters, eg JV:Z-BP188, and some IICs. Also worn on the squadron's Hurricane IVs, eg JV:S-KZ609; Spitfire IXs, eg JV:C-PT470; and Tempest VIs, eg JV:N-NX213.

**JV Station Flight Finningley (c)**  
Letters used post-war as on Oxford JV:NM799.

**JW 92nd Bomb Group, USAAF (c)**  
Letters carried by B-17s of 326th Bomb Squadron from January 1943. Worn by B-17Es, Fs and Gs.

**JW Central Fighter Establishment (c)**  
Letters carried on Spitfire XIVs and IXs, eg JW:V-MK176 post-war when the Establishment was based at West Raynham.

**JX 1 Squadron (c)**  
Letters used from September 1939 until 1950, successively on Hurricane Mk 1, IIA, IIC, eg JX:T-Z3455; Typhoons between July 1942 and April 1944, eg JX:L-R8752, JX:O-

MN242; Spitfire LF IXBs, eg JX:M-MK172 (a particularly smart and polished machine when recorded in April 1944 at North Weald); and on Spitfire 21s used May 1945 to October 1946, eg JX:G-LA217. Meteor IIIs used between October 1946 and August 1947; eg JX:B-EE458; and Meteor 4s (June 1948-September 1950); eg JX:E-VT284. Letters carried briefly on Meteor 8s in 1950, eg JX:E-VZ438.

**JY No allocation known**  
**JZ 57 OTU (c)**  
No 7 OTU was formed at Hawarden on June 15 1940 as a day fighter OTU. Its unit letters seem not to be recorded. On December 28 it was re-numbered 57 OTU and by then was flying Spitfires. It moved to Eshott on November 10 1942 also taking up residence at the satellite Boulmer the same day where the JZ element resided. Unit closed June 6 1945. Used Master Is and IIs, but mainly equipped with Spitfire Mk 1, II, VB, eg JZ:X-AD765. Later used letter/number identity, eg JZ:20, JZ:26.

**J2 479th Fighter Group, USAAF (c)**  
Letters carried on P-38s and later P-51s of the 435th Fighter Squadron May 1944 to November 1945.

**J3 458th Bomb Group, USAAF (c)**  
Letters carried on B-24s of 755th Bomb Squadron February 1944 to July 1945.

**J4 458th Bomb Group, USAAF (c)**  
Letters carried on B-24s of 753rd Bomb Squadron February 1944 to July 1945.

**J5 3 Squadron (c)**  
Unit coding JF became J5 after the war on the squadron's Tempests, eg J5:W-NV926. Received Vampire 1s in April 1948, eg J5:M-TG391 and FB Mk 5s in May 1949, eg J5:A-VV532. Letters relinquished in 1950.

**J6 1521 Radio Aids Training Flight (c)**  
Letters worn by Oxford 1945-46.

A line-up of Spitfire IXs of No 111 Squadron.



Continued on page 524

The F-15 Eagle, described as the "best, most manoeuvrable fighter ever built" is the first pure air superiority fighter to be developed for the USAF since the F-86 Sabre of 1948. High performing, heavily-armed, agile enough to perform 5g turns which would rip most aircraft to pieces, the F-15 has been designed to fulfil one specialist role: to rule the skies during the late seventies and early eighties. In simple terms, a dogfighter.



First requirement for a new air superiority fighter came from the USAF in 1965. Known first as the FX project, McDonnell-Douglas won the formal design competition and Pratt and Whitney the contract for the turbofan power units. Air superiority requires a combination of performance, avionics and weaponry, and McDonnell-Douglas made some 500 design studies of features for the aircraft. High speed agility was of prime importance. The need to save on weight, cost and complexity ruled out a variable-geometry layout, but twin engines were adopted for survivability. Multiple control systems will keep the F-15 fighting in the face of battle damage, and the engine is module-built to allow for rapid repair. Off-the-shelf avionics have been used wherever possible, and flying controls have been kept simple.

Main weapon for the F-15A is a General Electric 20mm Gatling gun mounted in the right hand wing root. The new Philco-Ford 25mm gun — 6,000 rounds per minute! — will be fitted to the second Air Force wing. Missile armament is a mix of 8 Sidewinders and Sparrows and the Navy's new Agile may be adopted later. Just as important as

the impressive array of weaponry itself is the Hughes APG-63 "dogfighting" attack radar which gives the pilot a continual flow of information and calculations for air-to-air combat.

The USAF has made some proud claims for the F-15. They say it will out-climb, out-maneuvre and out-accelerate any MiG now or in the next decade. In simulation exercises against a MiG-25 Foxbat the Eagle has proven superiority with either gun or missiles. Even assuming that Soviet missile technology is further advanced, the F-15's manoeuvrability will still give it a clearly-defined edge.

The Eagle made its first flight at Edwards Air Force Base on July 27th 1972 and by the end of 1973 eleven were involved in test flight studies. Fully operational deployment should be attained during 1976. The Eagle, with its smooth flat surface area painted "air superiority blue" looks every inch a lethal weapon. The dogfighter has returned.

Revell's superbly detailed 1/72nd scale F-15 Eagle Kit makes the most of this stunning new dogfighter. The finished model stands over 10½" long with a wing span of over 7". Full-realism details include removable Pratt & Whitney Turbofan engine. Opening clear canopy reveals cockpit instrument panel, control stick, pedals and ejection seat. To complete the kit optional position landing gear with movable wheels, speed brake, four sparrow missiles and full colour USAF markings. Add the Eagle's air superiority to your collection.

At your stockist NOW! It's the latest addition to the Revell range. CAT. NO. **H257**

There are 66 other superb 1/72nd models in Revell's range of over 270 action packed Kits.

Revell are the World's largest manufacturer of plastic hobby kits. Send **30p** for colour catalogue.

Revell (G.B.) Ltd., Cranborne Road, Potters Bar, Hertfordshire. Telephone 58261

**Revell**  
**a box full of action!**



## Return of the Dogfighter!



**NEW 1975/6 REVELL ENTHUSIAST 48 PAGE CATALOGUE**  
At your model shop now or send 30p to Revell (GB) Ltd.  
Name \_\_\_\_\_ Address \_\_\_\_\_  
Post to: Revell (GB) Ltd.  
Cranborne Road,  
Potters Bar, Herts.  
EN6 3JX  
AM 5/75





Hurricane 1 P3395 after being earmarked for France joined No 1 Squadron in June 1940 and served with it until November 1940. Between February and April 1941 it was used by No 55 OTU then passed to No 5 Flying Training School in whose hands it was written off in a flying accident on March 25 1942. The pilot when the machine was with No 1 Squadron was usually Flying Officer A. V. Glowes, DFM (IWM).

#### Continued from page 522

##### J6 406th Bomb Squadron, USAAF (c)

Used on B-24s from July 1944 by this Night Leaflet Dropping Squadron which operated from Cheddington and Harrington.

##### J7 442nd TCG, USAAF (c)

Used on C-47s of the 303rd Troop Carrier Squadron.

##### J8 8 MU (c)

Allocation confirmed, details not known.

##### J8 439th TCG (c)

Used on C-47s of 92nd Troop Carrier Squadron.

##### J8 24 MU (c)

Allocation confirmed, details not known.

##### J9 1668 UCU (c)

Letters carried on Lancasters, eg J9:M-HK741.

##### 2J No allocation known

##### 3J 441st TCG, USAAF (c)

Letters carried by C-47s of 99th Troop Carrier Squadron.

##### 3J 13 MU (c)

Letters carried post-war by an assortment of aircraft types, eg Oxford 3J:B-EB969; Tiger Moth 3J:T5702; Halifax VI 3J:F-RG872;

Dakota III 3J:KG311.

##### 4J 442nd TCG, USAAF (c)

Letters carried by C-47s of 305th Troop Carrier Squadron.

##### 5J 126 Squadron (c)

Adopted April 1944 when the squadron returned from the Middle East. Disbanded April 26 1946. Aircraft used: Spitfire IXBs April-December 1944, eg 5J:F-MK660; Mustang IIIs used December 1944-April 1946, eg 5J:J-KH526, and in 1946 on some Spitfire 16Es.

##### 6J 34 Squadron (c)

No 695 Squadron became 34 Squadron in March 1949. It disbanded November 1952 having served as an anti-aircraft co-operation squadron at Horsham St Faith. Equipment included Oxford 6J:E-PH467 used both by 695 and 84 Squadrons March 1948 to June 1950.

##### 7J No allocation known

##### 8J 435 Squadron (c)

Allocation confirmed but no details of use.

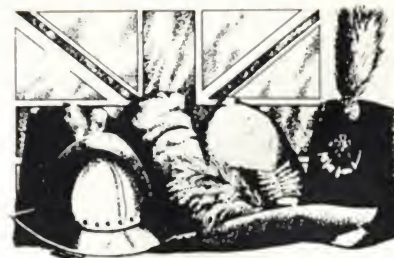
##### 9J 227 Squadron (c)

Letters used after the squadron reformed following service in the Middle East October 7 1944. Equipped with Lancasters and disbanded September 5 1945. Example used 9J:H-NN778. □

Mosquito XII HK229 was delivered as a Mk II to Marshall Flying School in June 1943 where it was then converted into a Mk XII. No 256 Squadron received it in July 1943 and took the aircraft overseas in September. It was busily employed in the Middle East in a night fighter role (note the black under surfaces) and eventually struck off charge March 29 1945 (Ron Clarke).



A battalion company officer carrying the half pike. Inset the sword hilt and net sash. Swords were still being privately made and the hilts varied considerably at this time.



#### 20th Foot circa 1749 by Bryan Fosten

THE REGIMENT, which was later to become the Lancashire Fusiliers, was raised in 1688 as Sir Robert Preston's Regiment of Foot.

In 1691, as Gustavas Hamilton's Regiment, the officers wore scarlet coats lined with scarlet and laced with gold for the field officers and silver for the subalterns.

In 1749 the regiment was commanded by the Earl of Albermarle and in 1751 became the East Devonshire Regiment. It served at the siege of Quebec in 1776 and was later interned at Saratoga.

The 1742 book and Millan's list both indicate red faced dark yellow with silver lace for the officers, and Morier's painting circa 1751 show the same uniform with square ended white lace with a black stripe along each edge and two red stripes. The grenadier is shown with red waistcoats and red breeches.

The grenadier caps were fronted with dark yellow and the white 'GR' cypher with the Royal Crown in proper colours above and with white palm sprays on either side. The back of the cap was red with white pipings and a yellow turn-up bearing a grenade with '2' on one side and '0' on the other, flanked with palm sprays. The little red flap on the front was lettered with the ubiquitous 'Nec Aspera Terrent' with the white springing Hanoverian horse beneath. The cap tuft was white. Grenadiers had red wings on their coats with regimental lace decoration.

We are lucky that Wolfe had his portrait painted as a Lt Colonel of this regiment. He carries a black cocked hat in the 'Kevenhuller' style edged with wide silver lace. His coat is scarlet with dark yellow (almost buff) lapels, cuffs and waistcoat. The neck of the coat is edged silver and the lapels also trimmed with wide square-ended silver loops. The dark yellow silver edged cuffs have long red cuff flaps with a silver edging and silver lace looping. No doubt the coat also had silver edging to the pocket flaps in the skirts and in the back vent. The facing colour waistcoat was also edged silver and had silver button hole loops with square ends.

The breeches would be white and worn with either long buttoned gaiters or black 'jockey' pattern boots with fawn cuffs and drawstrings. Officers wore crimson net sashes over the right shoulder with the tassels hanging on the left hip. The sword was worn on a waistbelt under the coat and over the waistcoat with the hilt of the sword protruding through the left side slit. The portrait of Wolfe by Highmore shows him wearing a small tight powdered wig with frizzing over

## british army uniforms 1660-1900

the ears. Half pikes were carried by battalion company officers and fusils by the grenadier company officers. □



Above a grenadier carrying a hide knapsack. He is also wearing his lapels buttoned across the chest. Note on all these drawings the common leg covering of the period, the gaiter, with a leather garter just below the knee and leather shoes. Left a battalion company private. In this instance the lapels are buttoned back. Inset is the regimental lace, white, edged black, with two red stripes.



# And now for something . . .

. . . completely different! Modelling fictional figures from Airfix parts by Ron Wood

CHRIS, MY WIFE, wanted to try making some figures, as a change from the aircraft she usually concentrates on, but she wasn't interested in soldiers. But she had just finished *Robinson Crusoe*, and thought a 54 mm castaway would be fun. Then Long John Silver suggested himself, and these two figures were created. Chris had never made any figures before, so these are first attempts. She enjoyed making them, and she learnt a lot from them.

All the parts are Airfix odds and ends, leftovers from their figure range, except Crusoe's rather ancient looking musket, which is a metal one from the spares box. Neither of us can remember who the previous owner was.

The dog was 4p from our local toyshop, and Captain Flint the parrot is scratch-built. Anybody who hasn't tried scratch-building a parrot at 54 mm scale has missed a lot, says Chris.

If you remember, Robinson Crusoe had already been on the island for 23 years before he met Friday, the tame cannibal. The model shows him discovering the footprint in the sand which first showed him there was somebody else on the island, when the cannibals were making a visit there to eat each other. He ran home and shut himself into his shelter, and bit his nails for a week before he plucked up the courage to go outside again.

The base is a long one, from the Scots Grey kit, covered with plastic padding to make a rough sloping beach. The footprint is carved out with a pointed blade, scratching out five toe holes and a sole. It was a left foot, by the way.

Chris took the gaitered legs from the French Grenadier, and carved them bare below the knees, trimming off the boots, and carving toes on to the feet. If that sounds a bit difficult, make a pair of rough boots with plastic padding, to look like goatskin, which was of course what Robinson Crusoe made his clothes out of when he ran out of cloth.

The breeches were 5 thou card from the kits. Airfix are fairly generous with this stuff, which is just as well, because our local model shop, like too many others, doesn't stock it. We made pieces to wrap around the legs, cemented them in place. When it was dry, putty covered the joins, and the bottoms of the breeches were cut ragged. A couple of patches were added, too, and cemented down well with liquid cement.

Any body will do, because every bit of detail had to come off, leaving just the bare core. When this was done, a pair of arms were chosen, and carved bare, like the legs. This didn't take half as long as you might think, with a file and knife. The arms were

then cemented to the body in the right positions. The musket was tried out in the hand at this stage, and the body tried out on the legs, which were already stuck to the base. We had to file the body a bit to make it lean forward.

When this had set thoroughly, Chris built up the sleeves of the shirt, simply by putting a ring of putty around each arm above the elbow, to make rolled-up sleeves. Then the waistcoat, another Crusoe-cobbled goat-skin effort, was made from separate pieces of 5 thou card, softened with cement, stuck in place, and patched like the breeches. Some crisscross lengths of stretched sprue made the times at the front. (Male superiority! Chris still can't stretch sprue!)

At this stage, the body and legs were painted, and then cemented together. The length of the waistcoat hides the join very well.

The head was from the Coldstream Guardsman. Plastic Padding made the beard and moustache, and built up the top of the head. When this was dry, and the whiskers were trimmed to the right shape, small triangles of 5 thou card were softened and applied to the head to make the 'Great cap of goatskin' which was regulation wear for 17th Century castaways.

The head was cemented to the body, the musket painted and stuck in the left hand, and the polythene dog trimmed a bit to remove the flash, painted brown, and cemented to the base next to its master. The

final detail was a sword, cemented to a sling of 5 thou card, and hung over the right shoulder to rest on the left hip.

Long John Silver, the rather likeable villain of Stephenson's *Treasure Island*, must be one of the best-known characters in fiction. And of course, anybody who has seen Walt Disney's film, with Robert Newton looking suitably fierce in the title role, knows what Silver looked like. The model was tremendous fun to make, again out of Airfix bits. We had a bit of a job making the hat, but now, of course, the American Soldier of the Revolution has a head and hat which could be used with no alteration at all.

Silver, you remember, led his treasure-seeking pirates to the spot, only to find the loot gone, thanks to Ben Gunn, the maroon. (If you haven't read the book or seen the film, of course, this will mean nothing to you!). So we modelled Long John looking into the hole, now containing only the empty chest and discarded tools.

First, the hole. I found a thick piece of card, and built the chest on this, out of card scored to represent planks, and bound at the corners with paper strips.

Next, a large, rough hole was cut in a long base, and the card with the chest on it was cemented underneath, so the chest stuck out of the hole. The ground was then built up with Plastic Padding, and if you can build up a hole, the hole was built up, too. Some odd planks with 'Walrus' written on them were scattered about, and a pick and shovel, from a Tamiya military kit, were left lying around in the hole.

The figure was again a mixture of bits from other kits. The leg was a gaitered one from another Grenadier, trimmed this time to represent knee breeches and stocking and shoe. The stump of the missing leg was sawn from the other kit leg, filed round at the end, and then the two legs, or the leg-and-a-bit, were stuck together.



The two body halves from the same kit were stuck together, and all the detail was filed off the back, leaving just the tails hanging smooth, to form the basis for the coat skirts. These were made from 5 thou card, and when they were in place and dry, they were filled and smoothed with body putty. The front of the coat was then smoothed, and a false front made and stuck on. The sketches should give you the right idea. The joints were sanded down and filled, and then the arms were stuck on. These came from the Coldstream Guard kit without any alteration, except that the left hand had to be cut off, and then filed and stuck on again in the right position to hold the crutch, which was a piece of plastic rod, with a card crosspiece at the top. Chris left it oversize, and then cut it to the right length when she assembled the body to the legs on the base.

A hole was drilled at this point in the left shoulder, to take the parrot. The head, in our case, came from another Coldstream Guard. (I bet you're wondering how we manage to build so many kits and have the heads left over!) The hat was a disc of thin card stuck to the flat top, and then curled up to make a tricorne hat, the crown of which was stuck on afterwards.

Long John Silver should be armed to the teeth, so we had a rummage through the spares box, and found two pistols from the Scots Grey, and these we gave him, one in his hand, and the other stuck in his belt, with a sword. If we'd had another musket of the right period, this could have been slung over his shoulder, but all the muskets we

Continued on page 528

## The first detailed book on the subject! No figure modeller dare ignore it . . . Modelling Miniature Figures

Edited by Bruce Quarrie

No other publication on this subject has gone into such detail about the different scales, materials and techniques that can be used when modelling, converting and animating model soldiers and other miniature figures.



Individual chapters are written by renowned modellers, many of whom have written for *Airfix Magazine*, and between them they cover figures ranging from the tiny Airfix plastic soldiers to expensive large-scale metal pieces. They include Donald Featherstone writing on metal casting (a useful process for wargamers who need lots of small figures), Martin Rendall on wood carving (a technique that may be new to many modellers), Roy Dilley on making the realistic dioramas for which he is famous, and Sid Horton on Airfix figures (of course!). The book is profusely illustrated with photos of figures under construction and finished, as well as line drawings showing specific conversion techniques and examples. Lists of manufacturers and their addresses, accessories, societies, and books for further reference make this an invaluable purchase for anybody making model figures in any scale. 152 pages, 9" x 6" (228 x 152 mm), 88 photos and 119 line drawings. £3.75 net (£3.98 by post)



Published by

Patrick Stephens Limited

Bar Hill, Cambridge, CB3 8EL. Telephone Crafts Hill 80010.

To Your leading bookseller or model shop of Patrick Stephens Limited  
Please send me one copy of MODELLING MINIATURE FIGURES.

I enclose my remittance of £3.75 (£3.99 if ordering direct from the publisher).

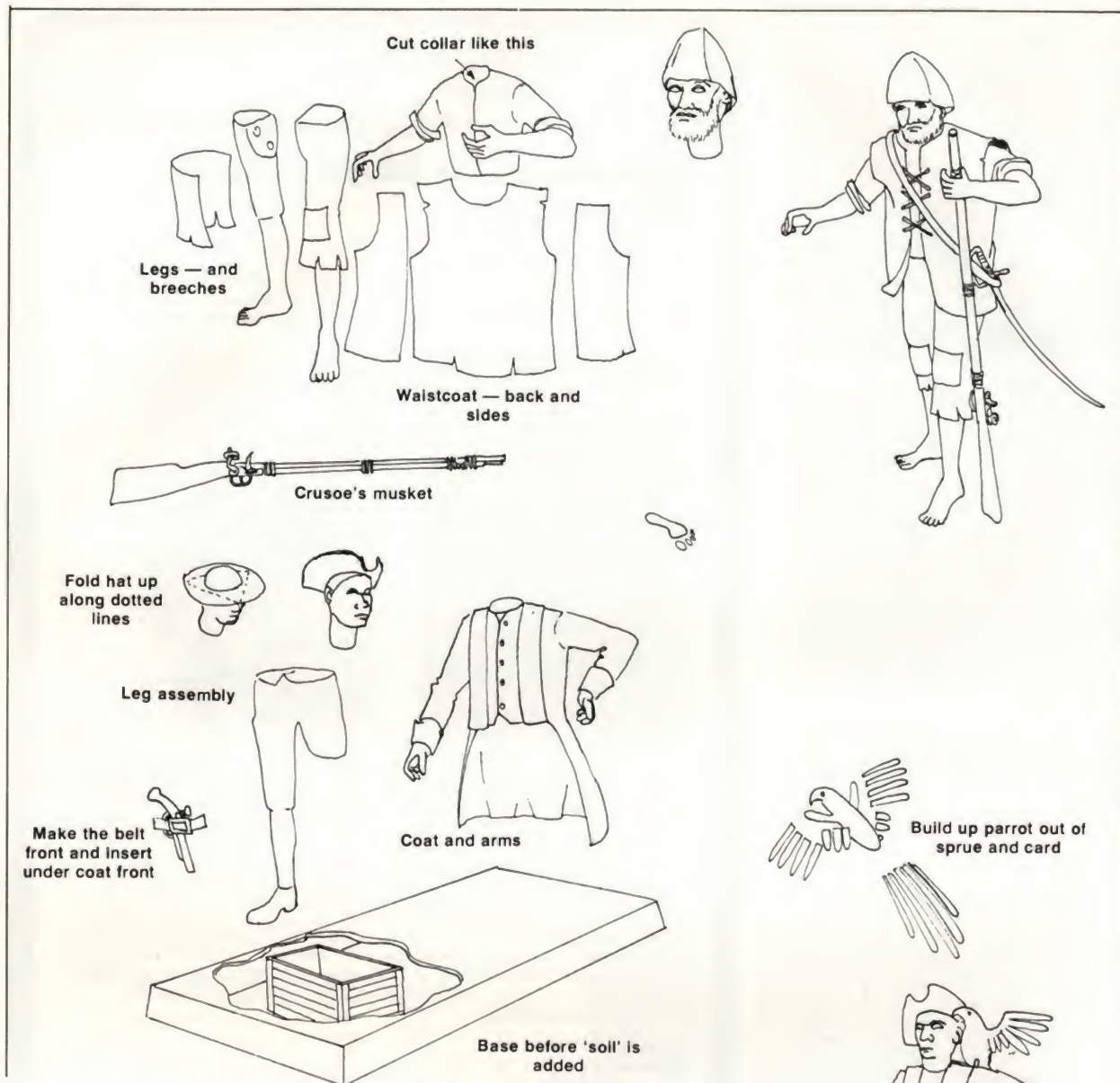
Name

Address

Please use block capitals

A5/75





could find were Napoleonic, except for a couple of FN rifles and a Schmeisser machine-gun, which would have given the figure a rather Monty Python appearance.

And now for Chris's masterpiece, Captain Flint the parrot, who was carved from a piece of sprue left over from stretching, so there was a nice point already at one end, which she bent easily into a beak. The wings were added to the body, and then, when this was dry, the feathers were cut from narrow strips of 5 thou card. There are five tail feathers, and these are cemented to the bird's blunt end. A piece of rod, by the way, was used as a handle for this operation, and when the parrot was complete, it formed the feet, and was stuck in the hole in Silver's shoulder. The wing feathers were cemented

in place, and when set absolutely hard, the parrot was gently cleaned up and cemented in place.

Painting these two wasn't difficult. Crusoe's clothes were a variety of browns, greys and tans, and Silver, being a sailor, wore mostly blue. The parrot was green, with orange and blue flashes.

So there you are. We thought of several other characters who would make decent models. Captain Ahab, from *Moby Dick*, or Hook, the *Peter Pan* pirate. Or Dracula and Frankenstein's monster. Or, seeing that the interest seems to be there, why not some elves, orcs and dwarfs from the *Lord of the Rings*. (I imagine dwarfs to look like sawn-off Vikings. Might be worth a try.) Have fun!



AIRFIX magazine

# Re-arranging the Avenger

Conversions from the Airfix kit described by Alan W. Hall

THE GRUMMAN AVENGER, like its successor the Skyraider, had many variants. Apart from its original torpedo-dropping role, the aircraft was converted both by the manufacturers and by those that used it for radar, search and airborne early warning duties. Other than this they were converted into target-towing aircraft or even as seven-seat passenger transports.

The main role of the converted Avengers was, however, in the anti-submarine business. Started by the Royal Canadian Navy and converted by the Fairey Aviation of Canada company, a number of ex-US Navy TBMs had the rear turret removed and extra radar equipment installed. The Royal Navy had 180 Avenger AS4s and 6s. These, too, had the turrets removed and a radar bulge let into the underfuselage position in the forepart of the bomb bay.

Other countries using converted Avengers were the Dutch, French, Italian and Japanese Navies whose aircraft all seemed to have slight modifications from each other.

As many of the 9,834 Avengers built were produced by Eastern Aircraft Division of General Motors, they had the TBM designation rather than the TBF of the parent company. The former were selected for conversion so that the three basic alterations were named TBM-3S, TBM-3R and TBM-3W2. The target-towing version became known as the TBM-3U.

## Graded conversions

The delight in converting the Avenger, and incidentally in writing an article about it, is the fact that the various modifications made to the basic airframe are such that there's a fairly easy one, a more difficult one and a hard conversion so that whatever your standard you can try at least one of

Being a devil for punishment, but needing an Avenger with a guppy radome to go with my earlier Skyraider conversion, I chose to make the TBM-3W2 which had the large APS-20 radar bulge under the fuselage. This, incidentally, is the same radar that equips the present day Shackleton AEW2 aircraft of No 8 Squadron and although still very much operational equipment is in fact over 20 years old!

The TBM-3W has an entirely different rear part to its canopy and the under fuselage turret removed. Other conversions do not need the latter modification so are therefore relatively easier to do than the one I started. This involves major surgery and by the time the various parts have been cut away from the basic fuselage there's not much left.

## Conversion kits

Since writing my last series of conversion articles for *Airfix Magazine* almost three years ago, the availability of modification kits from the vacu-form manufacturers has trebled and now there are few of the more interesting conversions left that do not have a kit from which to take the parts.

I'm as lazy as the next man and therefore chose to use the very useful parts supplied in the Airmodel conversion kit No 304. This supplies all of the pieces needed for the three main variants of the Avenger and also parts for the AD-4W Skyraider as well. Those wishing to convert the Frog Shackleton into the AEW2 will find the guppy radome suitable as it saves much hard work in making a wooden one.

The Airmodel kit costs a mere 60p which I reckon is good value. The main importers are Argyle Models in Scotland but they can also be obtained from other leading advertisers in this magazine.

Unfortunately the instruction sheet that

comes with the kit does not go into great detail on how the work should be done. It identifies the various parts, both in clear acetate sheet and polystyrene, and gives a few illustrations of markings, but that's not all. For the beginner, therefore, it is essential that a lot more information be available or otherwise, as we know from experience, a youngster may give up before he's properly started and miss the pleasure and satisfaction of making model conversions.

Only the basic tool kit of files, a saw, wet and dry paper and a decent workbench are required but I do advise buying a tube of contact adhesive for sticking the cockpit canopies in place. This was not necessary in doing the guppy version, described here, but any of the others will need this essential commodity.

The easiest way to describe the way in which the model was made is to divide the operations up into stages as follows:

## Stage 1

The preliminary work is described in the kit instructions by Airfix. These are simply to assemble the cockpit parts (2, 3, 4 and 5) and painting the interior predominantly black before leaving the parts on one side to dry. Contrary to the kit instructions we did not put the tailwheel in at this stage. There's a very good reason for this, as with the amount of work needed on this under fuselage area, the complicated and delicate parts of the tailwheel assembly could get broken or at least covered in body putty. I found it best to cut the locating pins off and assemble this section much later.

Both fuselage transparencies are added to each side of the fuselage using Mek-Pak as an adhesive. The oval transparency will be filled in with body putty later on and acts as a good base. Similarly the tail hook is not assembled as this fits outside the fuselage and is not an internal fitting as in the basic Airfix kit. All upper and lower turret parts are, of course, discarded.

Royal Navy Grumman Avenger AS.6 seen at Culdrose. The Airmodel conversion kit contains all the necessary parts to make this model, including the RN's exclusive smaller radome mounted under the fuselage.



May 1975





The first stage in the conversion. Here the fuselage has been assembled and the Airmodel parts are being cut out and prepared.



Rubbing down the top fuselage after cutting down the rear hump, squaring off the turret hole and filling with scrap plastic card.



The entire underside of the fuselage is cut off from the gunner's position to the cowl. The radome is being checked for width against the fuselage contour.



Building up the underside of the fuselage with plastic strips of different widths. The area where the radome fits is left clear apart from the thinnest plastic sheet which covers the entire area previously cut away.

The wings were also assembled at this stage. It is here that one probably becomes aware of the prodigious number of rivets on this kit. The Avenger was produced during Airfix's fascination with rivets period and although these are strictly accurate in their placing certainly need rubbing down! The fuselage will be well attended to during the construction work that has to take place but the wings do not get the same attention. It is

therefore worth keeping this job handy, for it can be done in odd moments whilst waiting for something to dry out.

Before sticking the parts of the wings together it is best to fill the locating pins of the rocket rails in the lower half with body putty. Just squeeze some through from the inside by placing the tube over the hole. When dry the little stub that protrudes can be cut off and the excess rubbed down.

## Stage 2

The cutting out of the parts from the Airmodel kit can now begin. To do this score round each part with a sharp knife having a robust blade. There's no need to cut the part out completely — simply score it round and then break off the unwanted material. If your knife is sharp you'll make a deep enough cut on the first scoring round of the part for this to be done easily. Next rub the parts down so that areas and edges which will have to have glue applied are flat. A large sheet of wet and dry paper can be used for this, laid flat on the work surface or pinned to a board. A circular rubbing motion gets the parts down evenly — and remember to use enough water.

Out of the various parts supplied in the vacu-form kit we need the radome and the rear cockpit parts, and of these only the radome needed assembly at this stage. Again Mek-Pak is easier to use than polystyrene cement as it flows along the joint easily and dries rapidly.

Leave the radome on one side to dry and rub down any joint line when convenient. Cut off the forepart of the vacu-formed rear cockpit and rub this down. Its assembly does not come until later but the preparation can be done now.

## Stage 3

Attention then returns to the fuselage. Here both the top and underside parts need a lot of work-time and patience. I started on the top first. All of the upper fuselage aft of the pilot's cockpit has to be levelled off and the turret hole filled in. To do this I used a fret saw to remove the hump aft of the turret, cleaned this up and then squared off the depth of the turret area by cutting the sides down with a knife. A thick piece of plastic card, taken from the scrap left over from the Airmodel kit, was then cut to fit the squared shape left. This has to be positioned so that when rubbing down, to return the fuselage contours, no sunken area is left. This is a fiddly job to do and must be done accurately or there will be much more filling to do later.

When complete a much thinner piece of plastic card (less than half the thickness of that in the fuselage sides) is cut to fit along the top of the fuselage. This provides a base for the new rear cockpit part, provided by Airmodel, and also fills the small hole that is bound to appear at the base of the fin fillet where the fuselage has been cut down.

I also found, that in my case, a very thin piece of plastic was needed at the pilot's cockpit end along the cockpit rim. I could not match up the Airmodel part and the kit canopy accurately without this and I advise that constant checking be done with these two parts to ensure that when everything is finally rubbed down they all fit.

After waiting for a reasonable time for the parts to dry out a little, fill any cracks with body putty and then start rubbing down with wet and dry paper. Use a coarse paper first, and possibly a file, to get rid of the major bumps and lumps, and then with a much smoother, finer grade finish off the contours so that the rear canopy will fit flush and snugly into the area. Don't stick it

on yet. Wait until the underside of the fuselage has been finished before doing that, otherwise the new part will get in the way during the major surgery that now has to take place on the underside of the fuselage.

## Stage 4

Again with the fret saw remove all of the underside of the fuselage from the gunner's position to the engine cowl. Clean this up and then with the thinnest of the two grades of plastic card fill the whole area in from nose to tail. On top of this progressively stick thicker pieces of smaller width making up the contour again. Leave the forepart where the radome fits as this has to go into the bomb bay area and the rear end can be shaped to overcome the new fuselage section.

Cover the whole area with a liberal coating of body putty and when dry give this a rough rubbing down. Then stick the radome in place without worrying too much about the fit at the rear end and once again use the body putty to build up the final contour. This totally changes the under fuselage shape and the cross section will have to be replaced with a lot of filing and work with coarse wet and dry paper. The oval transparencies in the fuselage sides can be filled at this stage ready for final rubbing down. Complete the job by coating the whole area with a final filler of talcum powder and clear dope mixture and allow to dry.

Next stick the rear part of the cockpit canopy in place and fill the cracks with dope and powder mixture. The whole model should now be ready for its final rubbing down. Spend a lot of time and patience on this as what happens now will make or break the standard achieved when the paint is applied. Remove any other rivets that might be showing up rather badly such as those on the forward fuselage below the canopy and on the fin and rudder.

## Stage 5

The last job to do before final assembly is to add the auxiliary fins to the tailplane. I let these into the latter by making a cut with the fret saw in the appropriate position back to the line of the elevators. You will have to cut the fins themselves from the thickish scrap plastic left over from the Airmodel kit and rub them into an aerofoil shape by rounding the leading edges and tapering off the remainder. Mek-Pak was used to keep them in place and then the tailplane assembly was fitted. Remember that the rivets, here, also have to be rubbed down. Take care in doing this however, as the lines on the elevators must not be removed as these are about scale size.

## Stage 6

Final assembly of parts can now begin. The tailwheel mentioned earlier, can be added, there's a radio mast on the rear of the cockpit, the undercarriage can be assembled and the tail hook converted. The latter can be stuck onto the fuselage under-surface and a piece of scrap sprue filed into shape for the housing. If the earlier work is satisfactory (and this is where accuracy

The radome has been stuck in place and the contours built up with body putty. These, after rubbing down, are covered with a talcum powder and clear dope mixture.

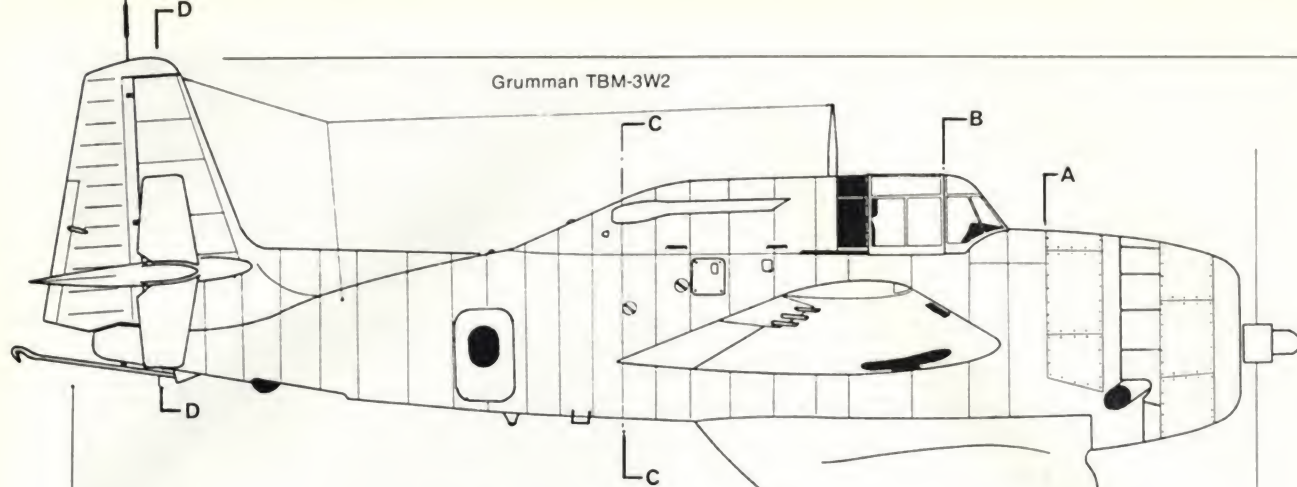
Assembly of the auxiliary fins on the tailplane. These were let in by a saw cut and made from plastic card left over from the Airmodel kit.

The Airfix kit canopy is cut down to fit the front part of the cockpit and the wings and tailplane stuck in position.

An underside view of the model nearing completion. Note that all the small parts such as the tailwheel and arrestor hook have been added.

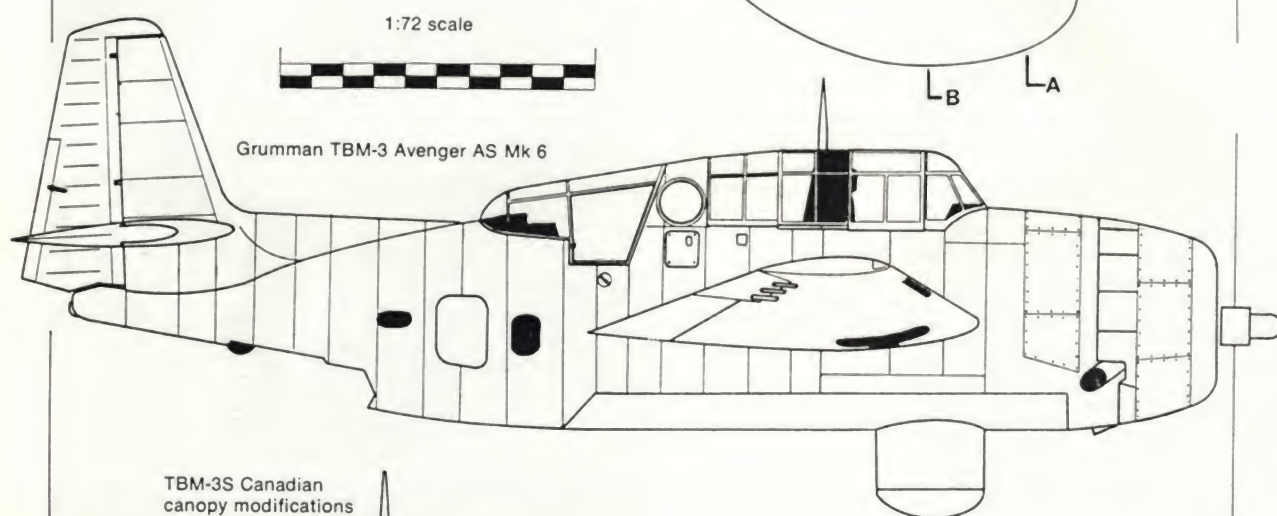
The completed model just before painting. In this view the cut-down canopy is being fitted correctly. It is not added until painting is complete.





Grumman TBM-3W2

1:72 scale

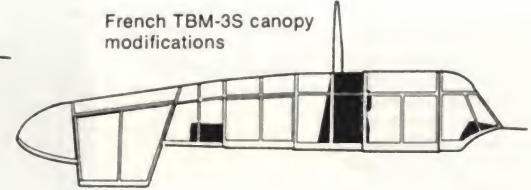


Grumman TBM-3 Avenger AS Mk 6

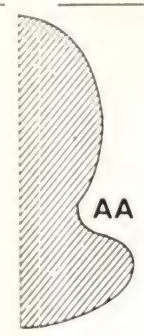
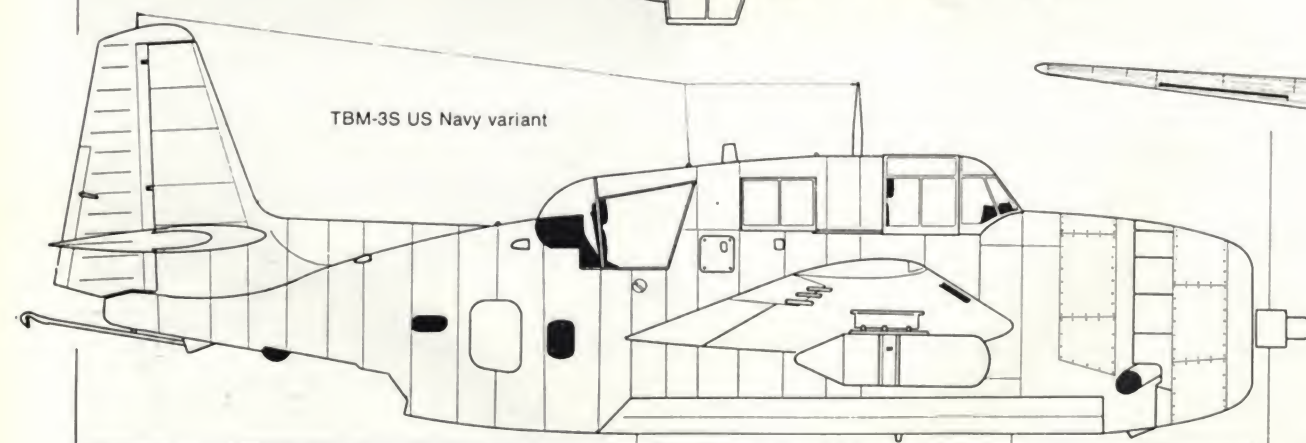
TBM-3S Canadian canopy modifications



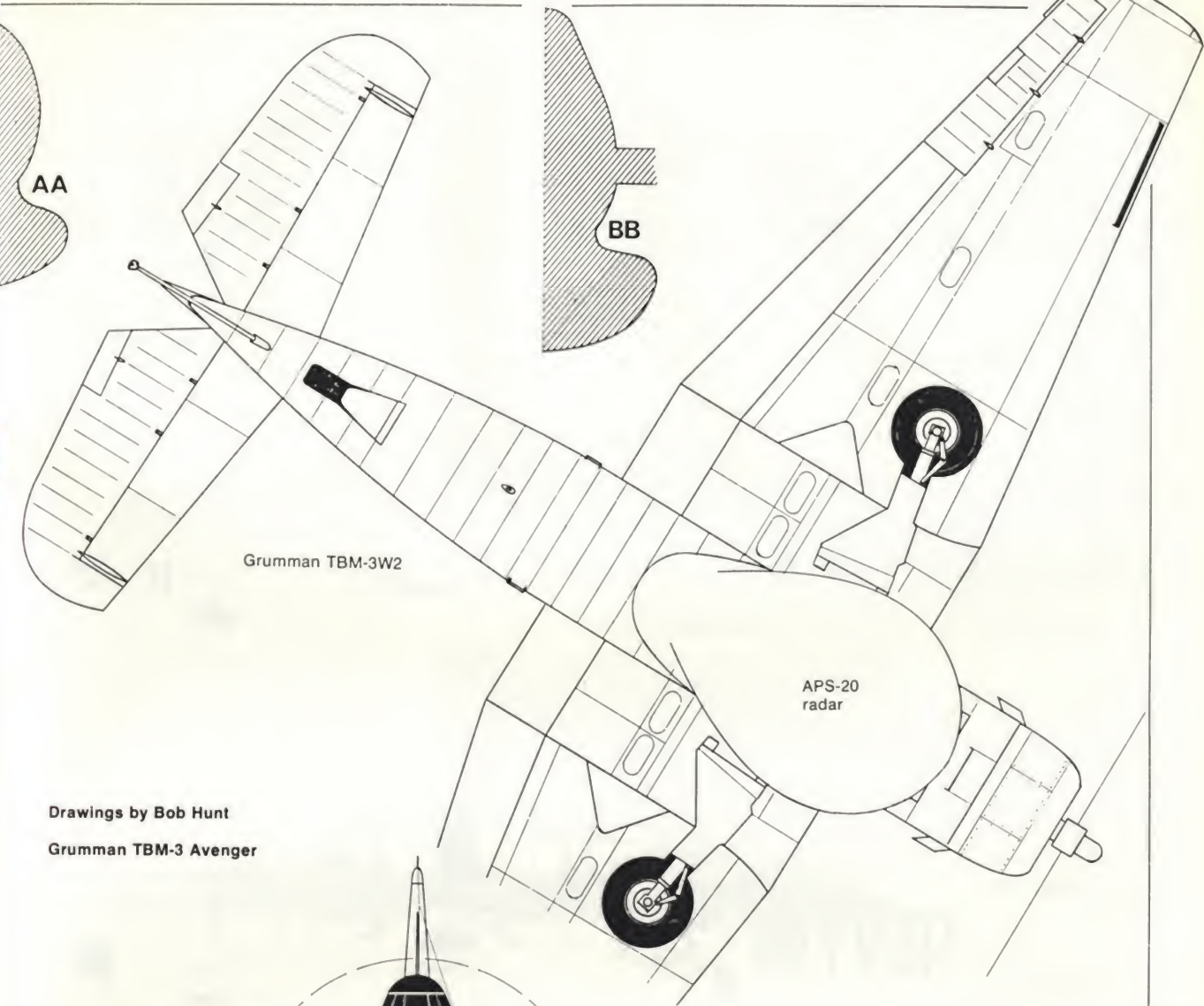
French TBM-3S canopy modifications



TBM-3S US Navy variant



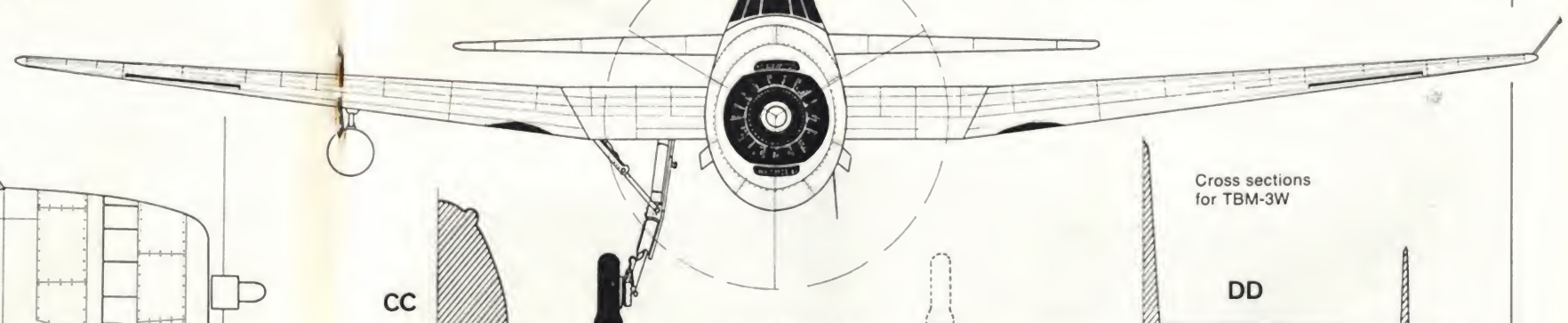
AA



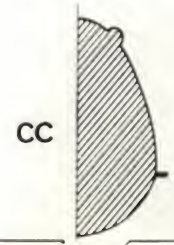
Grumman TBM-3W2

APS-20 radar

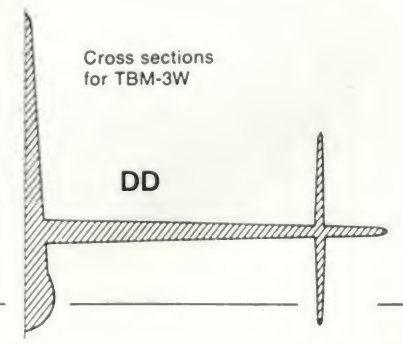
Drawings by Bob Hunt  
Grumman TBM-3 Avenger



Grumman TBM-3S



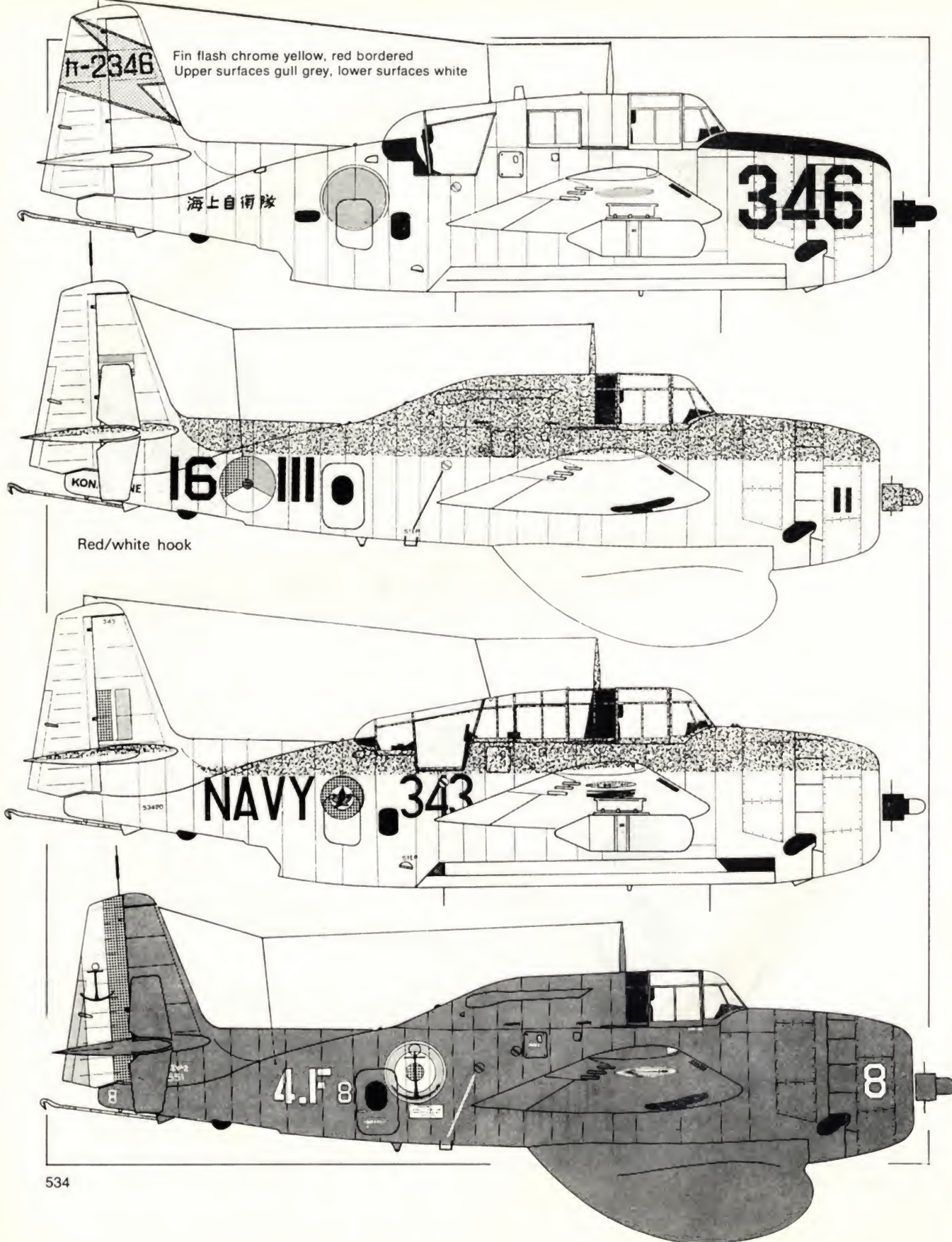
CC



Cross sections  
for TBM-3W

DD





**Key to drawings. Top to bottom JMSDF TBM-3S in light gull grey and white scheme with black Japanese characters and digits. RNNAS TBM-3W as modelled. Enough TBM-3s and 3Ws were obtained by the Dutch in 1953-4 under MDAP to equip two squadrons. This machine served aboard the carrier Karel Doorman. Canadian machine showing the last scheme worn by their Avengers including the word 'Navy' and number flanking the roundel. French TBM-3W of Flotille 4F based at Karoubla.**

comes in) you will find that the undercarriage legs will just fit round the radome. They were a close fit even on the full-scale aircraft and I found that the same applied to the model.

### Painting

The simplest colour scheme would be that of the dark gloss blue used by the US Navy or the French Aeronavale. US Navy markings are fairly easy to find in the spares box but the Aeronavale ones were not, so I compromised by painting my aircraft as a Royal Dutch Navy example. The standard colour scheme of extra dark sea grey and sky were applied with a little varnish added to the matt paint to give the semi-gloss finish essential to post-war aircraft. Masking was complicated, as I used an airbrush to do the work, but nevertheless it gave the desired straight dividing line down the fuselage sides and got into the inaccessible parts round the radome and undercarriage with ease. Once the paint had dried and the masking removed I was able to add the undercarriage wheels, pre-painted, and paint the propeller black with yellow tips. Gunmetal colour was applied to the exhausts and a red and white application made to the tail hook.

I found most of the decals I needed in the Frog Meteor F4 kit. Both wing and fuselage roundels were the right size and I found I could use the '9' out of the Frog code turned upside down as a '6' for the Avenger code. The other figures were an easy matter and I used Letraset for these. I also used Letraset for the 'KON.MARINE' marking under the tailplane, rubbed down onto the edge of an old decal sheet which had the carrier overall. This was then cut out and damped into position in the normal way. Small 'No step' marks and other stencilled lettering was found mostly from Modeldecal sheets.

### Other variants

Readers will soon discover that I took the most difficult model of the three Avenger conversions offered in the Airmodel conversion kit. By studying the methods used it is a simple matter to apply them to the other models so that any one can be made to complete satisfaction. To make this conversion was an interesting job and one well worth doing. The cost of the conversion is relatively small and certainly changes the outline shape of the Avenger considerably.



**Above** civilian TBM-3 borate bomber converted from an Avenger, registration N7961C, belonging to SIS-Q Flying Services of California. An underfuselage hopper replaces the radome. (Aviation Photo News). **Right** masking the lower duck egg blue surfaces before spray painting the upper surfaces. **Below** two views of the finished model.





# Scratch-building large scale tank models

Continuing last month's description of a 1:35 scale Cruiser Mk IVa by **Jeremy Broughton**

LAST MONTH I discussed various of the factors that need to be weighed before embarking on the construction of a complex model such as that illustrated. The construction of the track and wheels was then described; this article will show how a model is constructed on which these components may be mounted!

The main parts of the model whose construction will be described this month are made from plastic sheet, supplied in various thicknesses by several manufacturers. Most of the work will use sheet of 5, 10 and 20 thousandths of an inch (thou) thickness. I like, where structural strength is not important, to use sheet corresponding in thickness to the original armour, and a useful fact to remember is that 40 thou is approximately 1 mm; thus in 1:35 scale 20 thou represents 17 mm (2/3 inch), 10 thou represents 9 mm (1/2 inch) and 5 thou represents 4 1/2 mm (1/4 inch). Using this last, very thin sheet, fine detail may easily be reproduced, although if too much liquid cement is used the plastic will promptly dissolve.

I always begin the construction of the main body of a model where hull and turret meet: the turret ring. First a rectangle of 20 thou plastic sheet is cut to form the hull top. Four rectangles to represent the air intakes are cut out and a circle, radius 21 mm, corresponding to the turret ring is scribed with dividers; the disc is carefully cut out and the edge of the hole smoothed. A strip 3 mm x

132 mm of 10 thou sheet is cemented around the inner edge of the hole to project upwards; a fractionally longer strip is then formed around the first into another cylinder. The turret bottom is cut from 20 thou sheet as shown in the drawing and attached to this second cylinder; we now proceed to build up the turret.

To the rear of the bottom plate is added a wall formed of three pieces of 20 thou sheet, the central piece being curved to follow the projection of the turret ring. The floor of the turret bustle is added next, followed by the rear turret wall. Where possible the seams should be strengthened with thin strips of plastic. The sides are now added, followed by the roof: this is in two parts, and holes for the commander's cupola and loader's hatch should be cut out before installation.

The top edge of the side plates is left square, and should not be filed flush with the roof.

The turret front plate is now cut out — still from 20 thou sheet — and a rectangle for the gun mounting removed. The mantlet is constructed from sheet plastic; the rear is added as shown in the cross-section and holes drilled in them to accept the trunnions: the trunnions should be a stiff fit. The sprue. Trunnion supports are cut out and holes drilled in them to accept the trunnions: the trunnions should be a stiff fit. The trunnion supports, with the mantlet assembly between, are then attached to the inside



The model from the front, showing the lamps and gun mantlet.

face of the front plate, which in turn is glued in place in the turret. A rectangular cut-out in the bottom edge of this plate is necessary to clear the turret ring.

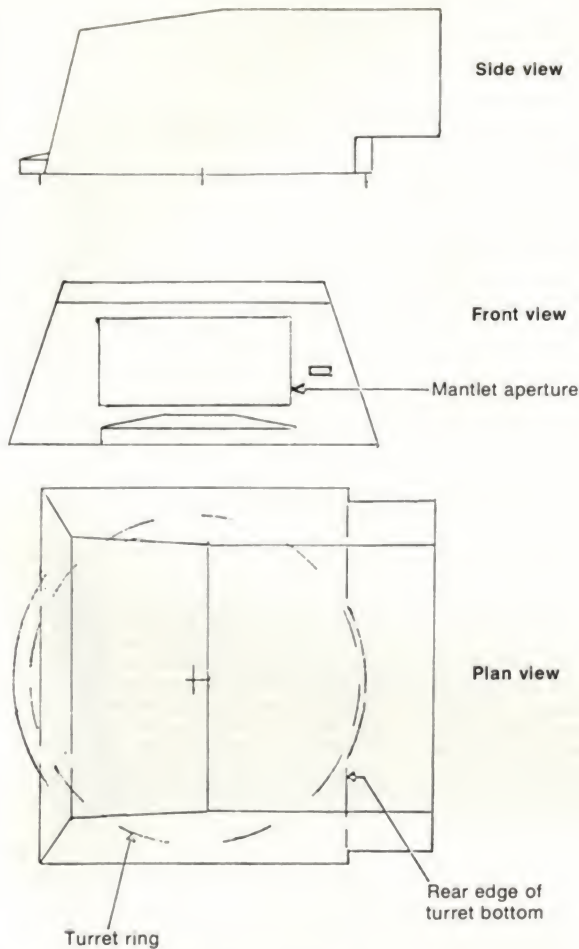
The basic turret is complete, and now the boxes formed by the armour plates added in the up-armouring process will be constructed to give the external form of the turret. I have provided drawings of this 'basic' turret as its outlines are obscured by the additional armour; when next month we come to the Cruiser Mk I a similar turret will be needed as this tank had the same turret as the original Cruiser Mark III.

The armour plates that surround the turret are, on the original tank, only 3/16 inch thick, so a method has to be used to represent this thickness and yet provide a rigid structure and allow the embossing of the many rivets that are a prominent feature. The method that I use for representing riveted armour employs a sheet of 5 thou plastic embossed with the rivet detail, this being supported by a thicker sheet of 20 thou plastic which is bevelled at the exposed edges to give the apparent thickness required. In this case the thinner sheet is of the necessary thickness and the thicker will be filed to a sharp edge.

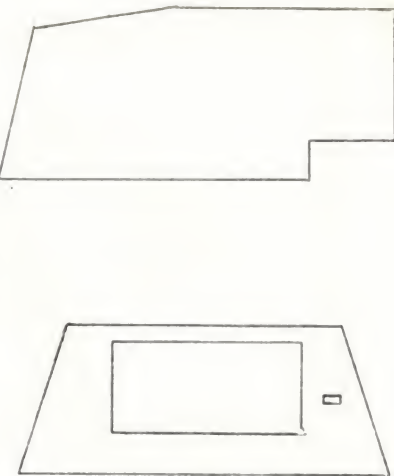
First the various supporting pieces should be cut from 20 thou sheet; pieces to extend the turret front are also needed. Those edges that will, after the plates have been installed, be visible, are filed down and those edges that will butt against other pieces shaped to fit neatly.

The shapes of the various surface pieces are now marked on the 5 thou sheet, allowing for the overlap where the supporting pieces butt together; the rivet detail is embossed on the reverse face. Some preliminary practice will probably be necessary to achieve the best results; and the combination of tool, support and pressure used is important. I used a compass point and supported the plastic on a thick sheet of card. When the embossing is complete the individual pieces should be cut out but not yet attached to their supports. A piece to extend the full width of the turret front is produced similarly.

The additional plates are supported by four open frames at each side and one solid



Left three view drawing of the basic turret in 1:35 scale, on which the additional plates are added to give the characteristic appearance seen in the photos and last month's plans. Right the basic shapes of the side and front turret faces. Below profile of the transmission housing. The outer face comprises the complete shape, whereas the inner lacks the upper triangle: the broken line marks the position of the rear hull plates.



taken that the resulting cylinder would fit snugly in the hole in the turret top.

Two diametrically opposed rectangular holes were filed in the cylinder: the projection supporting the armoured visor is built up around one. The opposite hole is sealed by a vision block mounting, represented by a piece of 30 thou sheet. The cupola is now cemented in place, and its plinth added from 10 thou sheet. This is formed by scribing concentric circles of diameter 24 and 25.5 mm; the plinth is made by curving a part of this strip into a cone of diameter 18 mm and cementing in place.

The cupola hatches are made from discs of 10 thou sheet; if they are to be mounted open then holes must be filed out for the ventilators and 'padding' added; a strip of padding is also needed around the bottom edge of the cupola. The loader's hatches are made similarly.

The turret is now complete except for the guns, wireless assembly and final detailing; these will be described in next month's article about the Cruiser Mk I which, as previously remarked, had a very similar turret to the Mk IVa.

So far the only piece of the hull that has been constructed is the top plate with the lower part of the turret ring. First the hull will be constructed; the shape is shown in the cross-section, but the side walls end at the vertical bulkhead at the rear of the engine compartment. Four pieces to this shape are needed, two of 20 thou for the inner walls and two of 10 thou for the outer walls.

2.5 mm wide strips are used to space inner walls from outer and are arranged to give maximum rigidity; the two assemblies are then mounted under the hull top-plate with two rectangular bulkheads separating them. The outer plates should have cut-outs to show the exposed axle ends and special support should be arranged under the hubs of the road and idler wheels.

Boxes, painted black, are mounted under the air-intake openings and in each opening are set lengthwise three strips at 30° to the vertical; these represent the louvres. The floor is then added: it is mounted between

Detail view of the turret and commander's cupola. The holes in the tyres and the separation of the outer turret plates from the main turret are plainly visible.



frame and one open on each side at the rear: the frames are cut from 10 thou sheet and allowance must be made when shaping them for the bevelling of the plates that they are to support. The frames are attached to the turret, and before adding the plates it is necessary to paint the inner faces of the boxes that are about to be formed. I assumed that once this tank left its factory no one was interested in painting such inaccessible areas and accordingly painted turret sides, frames and the inner faces of the plates dark green.

When the supporting plates are firmly in place the outer 'skin' of embossed plastic is added to the 'carcass'. Several applications of liquid plastic cement are needed to mount each piece; when one section of the skin is firmly in place the next has to be painted with cement and rapidly pressed onto the carcass. It is not possible to attach a complete piece in one step due to the rapid evaporation of the cement, and if too much cement is used it may distort the thin plastic. It is very important that the skin is at every point attached to the carcass for otherwise unsightly 'balloons' will form, particularly around rivets.

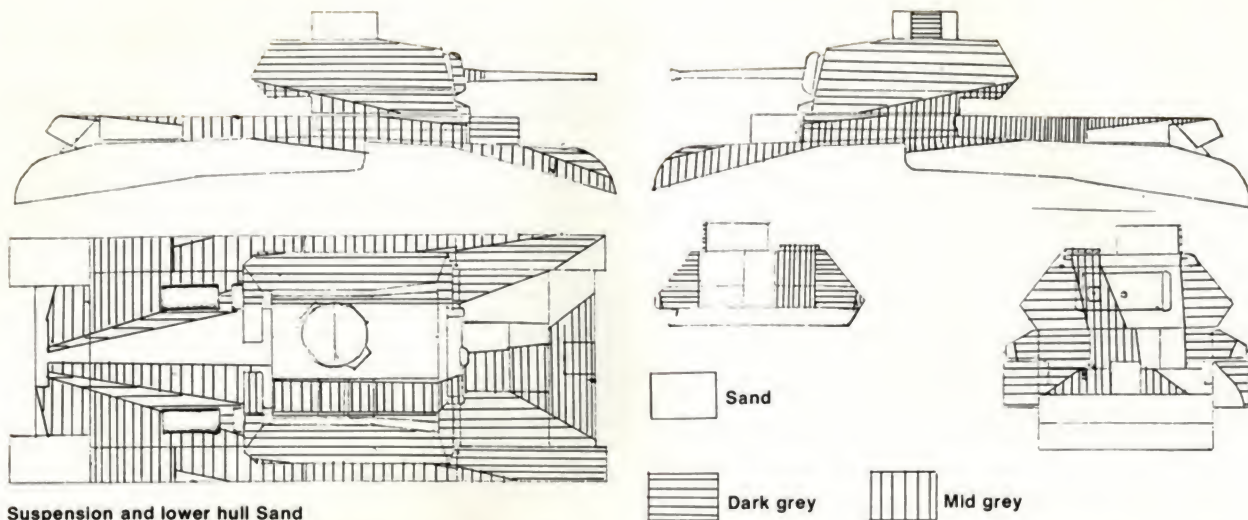
The circular extension of the front plate

that accommodates the turret ring is now built up with curved strips of plastic sheet until the necessary projection is achieved. The framing is added, and the curved upper section is produced from 10 thou sheet. By experiment a curve is cut for the rear edge of this piece that enables the front edge to meet the upper edge of the extension, and when the piece has been firmly attached its forward edge is trimmed.

On the left of the mantlet is the outer cover of a vision slot in the turret wall; a hole should be filed through the thickness of the wall before mounting this cover. The slot is covered internally by a shield moving between vertical guides, which may be left open.

The commander's cupola is built next. It is formed from two curved strips of plastic sheet, the inner of 10 thou sheet being a little lower than the outer, of 20 thou sheet, in order to leave a ledge on which the hatches will sit. To curve the strips to shape I found a wooden cylinder of correct diameter, then bound one of the strips around it. The cylinder was immersed for two minutes in boiling water, then cooled in cold water. This was repeated for the other strip; they were then cemented together, care being





the inner side walls and there is a raised section under the fighting compartment.

If the interior of driver's compartment is to be visible detail should now be added. There is no bulkhead between driving and fighting compartments, but directly under the left-hand wall of the driver's box is a closed box with the instrument panel on the inward-facing side. The driver's seat is mounted on two rails with steering levers to left and right; there is a rack carrying a fire extinguisher directly in front.

The hull around the driving compartment is now built up; the composite construction used earlier for the additional turret armour is used again and this simplifies the representation of the various hatches. The front plate of the driver's cab carries the vision slits and has on either side rearward-projecting strips for protection when the plate is closed; at the bottom is a forward projecting strip which meets a forward opening hatch to form, when the plate is down and the hatch is closed, a horizontal plane. The hinge joining the roof and front of the cab is covered by a strip of fabric, which I represented by tissue paper.

The turret basket may now be constructed if either the turret hatches or driver's plate are open. Most of the details can be seen from the cross-section; there is a circular floor that rests on the raised floor of the fighting compartment and in the centre is mounted a cylinder that housed the rotary connections between the hydraulic and electrical systems of hull and turret. To the rear is the pedestal on which the commander stands, and mounted on this is a column supporting a triangular seat. To the right of this is a curved ammunition bin; the loader sits on the padded lid. Opposite is the gunner's seat, which may move along an inclined column as the gun is elevated and depressed.

The turret is connected to the basket by a curved wall that extends through an arc of 60° from the turret centre line to the left; this is made from thin sheet and I devised a system of pegs and slots to engage this sheet with the edge of the turret floor, so that the floor does not have to be cemented to the rest of the turret, but will rotate with the rest

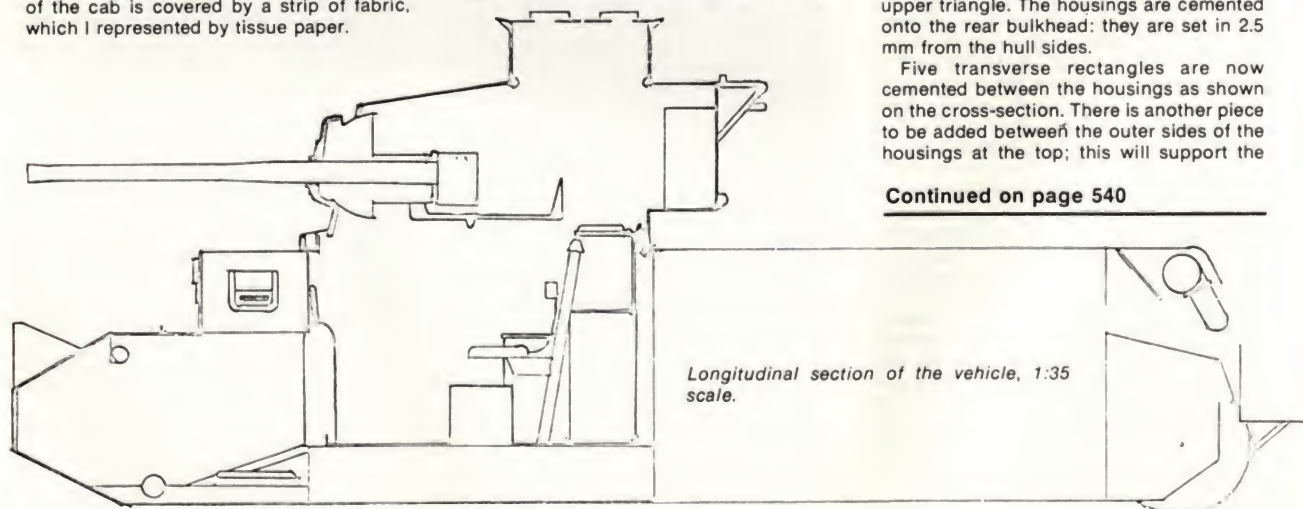
of the turret. The wireless set is mounted in the turret bustle, towards the loader's side; it is painted a dull black, and I included a haphazard collection of dials, knobs etc.

The track guards are now cut from 40 thou plastic sheet. To ensure that they are mounted squarely cement the ends of the stowage boxes in place on the hull sides, and attach the track guards only when the cement has thoroughly set. The stowage boxes can now be built up: note the curious rear extension of the sides. The flaps are made of 5 thou sheet with three parallel lines embossed on the inside.

The section of the hull behind the rear engine bulkhead is now built; it is of complex shape but is largely hidden in the photographs by the stowage on my model. First the two transmission housings are constructed; each consists of two pieces of 20 thou sheet separated by 3.5 mm wide strips and has a curved strip of 10 thou sheet around the curved portion. The shapes of the longitudinal pieces are shown: note that the inner piece lacks the upper triangle. The housings are cemented onto the rear bulkhead: they are set in 2.5 mm from the hull sides.

Five transverse rectangles are now cemented between the housings as shown on the cross-section. There is another piece to be added between the outer sides of the housings at the top; this will support the

Continued on page 540



No. 8010 German Tank Destroyer Marder III. Price 55p.



No. 8011. 'Hetzer' German Tank Destroyer. Price 55p.



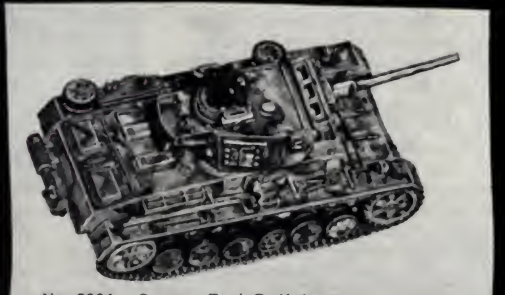
No. 8004. German 105 mm. self-propelled Howitzer 'Wespe'. Price 55p.



No. 8013. German self-propelled Howitzer 150 mm. Hummel. Price 55p.



No. 8003. German Tank Kpfw II Ausf 'F'. Price 55p.



No. 8001. German Tank Pz.Kpfw III Ausf 'M'. Price 55p.



No. 8002. German half-track 'Hanomag' Sd.Kfz 251/1. Price 55p.

## NEW FROM ARMOR ESCI

We promised you more of this fabulous range of Military Miniatures in 1/72 scale and here they are — perfection in miniature. As we said in January, the accuracy and attention to detail of these wonderful models has to be seen to be believed. You must begin your collection NOW to be the proud possessor of a series that will be the envy of everyone who sees it. You see them in your local model shop NOW!

RIKO

Prices shown here are suggested selling prices only and include V.A.T.

RICHARD KOHNSTAM LTD., 13-15a HIGH STREET, HEMEL HEMPSTEAD, HERTS.



silencer. The silencer consists of a 42 mm length of sprue, 5 mm diameter, and the curved pipes that lead to the fish-tail exhausts are made from bent sprue. The silencer cover of the original is of very thin metal and so the turret-armour method is used again: the sides are made from 5 thou and 20 thou pieces, the latter with a bevelled rear edge, cemented together, and the top is a single curved rectangle of 5 thou sheet. Before installation three transverse slits are cut on either side of this rectangle, and the whole area painted a dirty, rusty colour.

An open-topped box is now made from 10 thou sheet and mounted on the transmission housings; it is supported on either side, by an arm and will ultimately carry the rack of petrol and water cans.

The rearmost section of each track guard is now added; both extend inward to meet the transmission housing. The air filter covers are next made from 10 thou sheet. The raised curved section on top of each is filed from a 20 thou strip.

The air filters themselves are largely hidden. At the rear a box shape is visible and at the front is a large hemisphere joined to the hull by a horizontal pipe.

The last addition to the hull at this stage is the headlamp housing. I cast the lamp in clear plastic and painted the rear part silver; this was then glued to the front plate and the housing completed and mounted on the hull.

We have now reached the important stage of mounting the suspension and tracks on the hull. First the hull sides and under-surfaces of the track guards are painted a sand colour. The plastic discs cemented to the inner faces of the road and idler wheels will hold these wheels at the correct distance from the hull sides and so are cemented directly to these pieces.

The fore- and rearmost road wheels may be positioned most easily by reference to the cut-outs in the sideplates and should be mounted first. The other four road wheels and the idlers may then be mounted by measurement. Care is needed to ensure that the outer faces of the four road wheels are accurately aligned.

The axles of the sprocket wheels have, because they project so far from the transmission housings, four supporting strips, forming an open pyramid that supports the central axle. The axles are made from sprue and the pyramids from 10 thou sheet: the sprockets are then mounted on the axle-ends.

Now the track must be assembled from the castings. Begin by gluing together four sets of castings to form the upper and lower 'runs' of the track on either side. When these lengths are firmly glued together they should be painted, together with several extra track-castings.

The particular difficulty lies in fitting the sections of track around the sprocket and idler wheels. First the track is attached around the sprocket: it may indeed be better to do this before mounting the sprocket wheel in place.



**Above** rear view of the model showing the tank number, T.15229, in black on a sand rectangle on the silencer cover. The same number is white on both sides of the turret. Note exhausts, air intakes, and rack of petrol and water cans. **Right** bird's eye view of the finished model clearly showing the lines of the camouflage pattern and the additional armour plating on the turret. The shield attached to the gun mounting is just visible through the commander's cupola.



A single piece of track is heated in boiling water and then, while still pliable, is bent around the sprocket and the sprocket teeth engaged in the slots in the sides of the track. It must be held in place until completely cool, when it will retain its new shape indefinitely. No glue is needed and in fact the track is held in place exactly as on the original.

The lower run is now attached to this first piece of track; heat will be needed to curve the track around the first and last road wheels.

Ideally the next piece to be added should pass around the idler without a joint; it may be necessary to add a shorter length cut from one of the castings to achieve this. The top run of track is now added and a final piece added to join by the sprocket with the original length.

I have found it unnecessary to deliberately attempt to represent the characteristic track sag: in time the plastic track will stretch under its own weight to sag most convincingly and any effort by the modeller to produce his own sag will probably give in the long term an exaggerated effect.

The tracks, particularly their upper portions, are given a final painting, and then the sandshields are added. First the curved sections at either end of the trackguards are made from 10 thou sheet, formed by immersion in boiling water. The sandshields are then cut from 5 thou sheet; the rear pair are in three pieces joined by plastic strips on the concealed face, and should be creased before mounting.

Various small details must now be added to complete the hull, including sidelights, fire extinguishers and various hinges,

hatches, etc, on the rear hull decking.

The model is now painted. I have included plans to show the camouflage scheme applied to my model; the lower areas of the tank are painted a sandy yellow and the upper areas are covered in a series of strips and triangles of sand, mid-grey and dark-grey. This will be discussed next month more fully when a very similar camouflage pattern will be applied to a Cruiser Mk I. A steady hand is needed, particularly at the 'focus' of the triangles on the silencer cover, but the effect is most impressive.

The rack to be mounted on the rear box is now made up from strips of 10 thou sheet. The cans are made in pairs and then painted. Water cans are white with 'WATER' in black, and petrol cans are bare metal. They are placed in the rack, the retaining strips added and the assembly attached to the rear stowage box.

The various bundles, boxes and helmets generally strewn around the exterior of an 8th Army tank can then be added and the pristine paintwork spoiled in whichever way the modeller prefers. I sprayed successive coats of very thin grey poster paint. The paint runs into nooks and crannies before drying to leave a convincing representation of the ever-present desert dust. In order to persuade the paint to coat the tracks successfully a little detergent is added.

I hope that the ideas and techniques described in this article and its predecessor have proved useful and stimulating. Next month similar methods will be employed to produce a model of the Cruiser Tank Mark I which, although designed to fulfil the same role as the A13 series, presents a very distinctive appearance.



## Part 6 — The Armstrong Whitworth Atlas

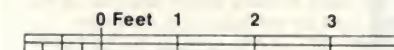
THE ARMSTRONG WHITWORTH Atlas was the first aircraft designed from the outset for army co-operation to enter RAF squadron service. It replaced the Bristol Fighter in squadron service from 1927 when initial deliveries were made, and in all 271 were delivered to the RAF as Atlas (AC), and a further 175 as trainers known as Atlas (DC) or (TM) until June 1932 when the designation was changed officially to Atlas (T). The initials stood for Dual Control, Two-Man version and Trainer respectively.

Squadrons using the AC version were, with locations given as at January 1 1932; Nos 2 (Manston), 4 (Farnborough), 13 (Netheravon), 16 (Old Sarum), 26 (Catterick) and 208 (Heliopolis), all at three flight strength. The DC versions were used by

Station Flights at Andover and Duxford, the Home Communication Squadron at Hendon and Nos 2, 3, 4 and 5 Flying Training Schools.

### Atlas livery

The RAF Atlases had most conventional finishes. Overall they were the standard powdered aluminium doping. The promulgation of an order for serial numbers to be displayed under the wings in 30-inch characters of 4-inch strokes, coincided with their delivery and was thereby applicable to all. They had a relatively short life, the majority being replaced by the mid-thirties; but in that time they were subject to the August-October 1930 rudder striping changes from blue, white and red from the



Yellow Black

**Above** canvas bands for exercises, 1927. **Left** an early production Atlas AC that served with No 26 Squadron, bearing red diagonal bands around the fuselage (MoD).

**Below** later production Atlas AC showing modified fin form and Handley Page leading-edge flaps introduced on the top wing (MoD H24).



rudder post to the reverse order.

No longer did Armstrong Whitworth emboss the cowlings of their aircraft with the letters 'A.W.' as on FK8s, but a characteristic of the firm's was evident even in the rigid way the finish of RAF aircraft was decreed at this time. This was by the insertion of hyphen between letter and number in the serial marking on the fuselage side. In some cases the hyphen was even included on the underwing serial presentation.

Although a marked improvement on the Bristol Fighter, the Atlas did not come up to expectations and no sooner was it in service, with quantity production orders on hand, than the Air Staff sought a replacement. However, in the years it served, late twenties and early thirties, it did see some changes in Army/Air colours.

#### 'Enemy' markings

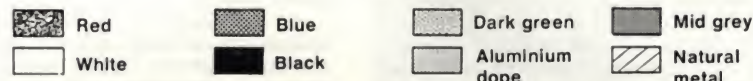
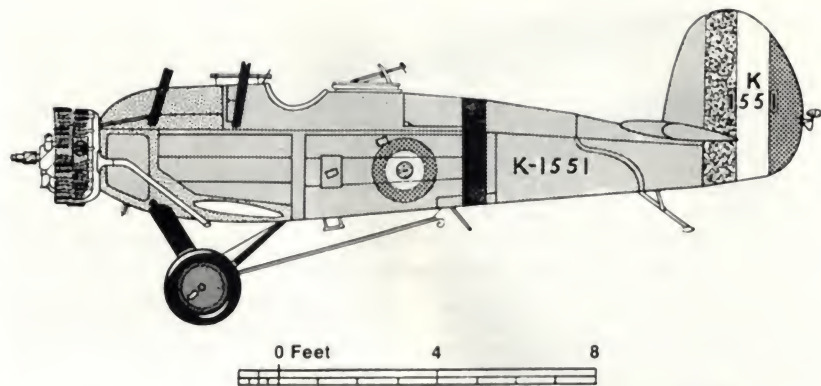
An essential element of Army/Air exercises, usually held in the autumn after the harvest had been gathered in, was the representation of 'enemy' and 'friendly' forces.

In general, the 'friendly' forces were those playing a defensive role and retained normal RAF markings, while the invaders or attacking forces would represent enemy. Up to 1927 standard markings for the attackers was coloured streamers, but these could be confused with formation leader's streamers. These were in blue, yellow and red, in the style used for message bag streamers.

From 1927, it was pointed out by the Air Ministry that in active operations, identification would be by national insignia — not streamers, and the School of Army Co-operation tried out a standard 'enemy' insignia. It was decided that this would be a yellow Maltese Cross on a black background. Strips of canvas were prepared, as illustrated, for placing over the under-surface roundels of the lower wings of Bristol Fighters. However, in any side-slipping manoeuvre, these canvas markings tended to flap up and slightly affect performance, so that for the Atlases in service for the 1929 exercises a new method was tried.

To present the same marking by direct painting, lamp black was mixed with size and water and applied over the lower wing roundels. When dry a Maltese Cross in size, mixed with yellow ochre and water, was applied. It could be washed off with soap and hot water.

**Top** drawing of a typical Atlas aircraft of No 16 Squadron, 1930 (Peter G. Cooksley). **Centre** an Atlas serving with No 208 Squadron in Egypt, 1935, bearing an unofficial unit emblem on the fin (MoD H871). **Right** the standard truck for Army Co-operation Squadron mobility, the Morris Commercial adapted for the RAF.



#### Canadian and civil service

Quickly replaced by the Audax, the remaining Atlases were used as instructional airframes and renumbered in the M serials as shown in the allocations table.

The Atlas was not exclusive to the RAF either as an army co-operation aircraft or trainer. The Royal Canadian Air Force ordered two AC type which were registered G-CYZA-B, re-serialled 17 and 16 and then later 402 and 401; two more ordered as 17 and 18 became 403-404, and 112 allotted to a further purchase became 405. These were supplemented by ten ex-RAF Atlases supplied later.

Four trainer types, G-ABHV-X and G-ABOO, were allotted to the Armstrong Whitworth Reserve School operated for the RAF. Of these G-ABHV overshot on to a railway line January 13 1932 and G-ABHW was completely wrecked October 8 1931 when a pupil lost control and a wing hit the ground; fortunately both instructor and pupil escaped uninjured.

#### AW Atlas RAF serial allocations

**J8675** Civil H-EBLK modified for RAF evaluation.

**J8777-8801** 20 AC ordered June 1927 to Spec 33/26. J8777 used for tests, J8778-91 reserved for service trials with No 13 Squadron, J8792 trainer prototype. J8799 float-plane version. Rest delivered to store.

**J9039-9050** 12 AC ordered additional to June 1927 contract to equip No 26 Squadron.

**J9129** Civil demonstration aircraft G-EBNI purchased for RAF in 1928.

**J9435-9477** 43 DC ordered August 1928 for Flying Training Schools.

**J9516-9564** 49 AC ordered October 1928 to equip Nos 2, 4 and 13 Squadrons. J9564 became RCAF406.

**J9951-K1036** 87 AC ordered August 1929 mainly for overseas used in No 208 Squadron and No 4 FTS. J9951 became RCAF 407 and K1018 became instructional airframe 642M.

**K1113-1114** 2 AC replacement aircraft.

**K1172-1197** 26 DC ordered March 1930 and mainly delivered to RAF College, Cranwell. K1196 became instructional airframe 724M.

**K1454-1506** 53 DC ordered June 1930. Delivered to training schools. K1464, K1471, K1472, K1477, K1479, K1501 became instructional airframes 730M, 802M, 818M, 722M, 819M, 678M respectively.

**K1507-1602** 96 AC ordered June 1930. General replacement aircraft. K1513-1514, K1516, K1528, K1534, K1541, K1547, K1553, K1557-1558, K1564, K1568, K1570, K1591-1594, K1596-1598 became respectively instructional airframes 855M, 641M, 847M, 725M, 848M, 640M, 741M, 735M, 586M, 736M, 742M, 793M, 796M, 668-671M, 672M, 862-863M. K1529, K1531, K1540, K1545, K1550, K1556, K1561, K1566 became respectively RCAF 408-415.

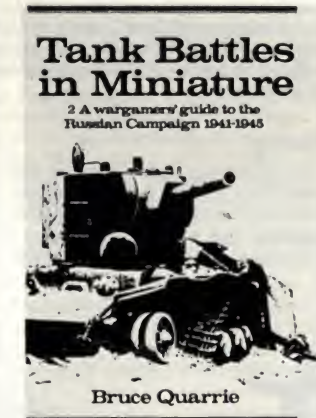
**K2514-2566** 53 DC, final Atlas order. K2516, K2523, K2527, K2535, K2549, K2553-2556 became respectively instructional airframes 798M, 723M, 721M, 875M, 703M, 731-734M. □

Wargaming with a difference . . .

# Tank Battles in Miniature 2

## A Wargamers' Guide to the Russian Campaign, 1941-1945

by Bruce Quarrie



'Extremely comprehensive' is how Martin Windrow describes Bruce Quarrie's new book. Following the same format as Donald Featherstone's earlier title in the series on the Western Desert Campaign, (£2.80 net, £3.03 by post) it combines a concise but detailed account of the actual campaign with descriptions of the tanks, guns, aircraft and organisation of the opposing forces, and numerous suggestions as to how these can be reproduced in miniature on the tabletop. The contents include chapters on tank and anti-tank fire, terrain and climate, partisans, armoured trains and artillery support.

200 pages, 8½"×5½", 25 photos and 37 maps and diagrams. Case bound with colour laminated jacket. £3.95 net (£4.18 by post).

**PSL** Patrick Stephens Limited  
Bar Hill, Cambridge, CB3 8EL. Telephone Crafts Hill 80010

To Your leading bookseller or model shop or Patrick Stephens Limited  
Please send me Tank Battles in Miniature 2: Russian Campaign/Tank Battles in Miniature: Western Desert Campaign.\*

I enclose my remittance of £3.95 (£4.18 if ordering direct from the publisher).

Name \_\_\_\_\_

Address \_\_\_\_\_

Please use block capitals

\*Delete as applicable A5/75





George Gush

## renaissance warfare

### Conclusion — The English Civil War

THE CAVALIERS and Roundheads seem a logical choice for the last armies to be included in this series, because they are not only of particular interest to British modellers and wargamers, but also represent very well the 'standard' pattern of weaponry, tactics and organisation which had been evolved from nearly two hundred years of experimentation in the Renaissance period, and which was to be generally followed throughout the later 17th Century, until the bayonet finally removed the pikemen from the battlefield.

At the same time, the English Civil Wars of the 1640s are by far the best-known and best-researched part of the whole 'Pike and Shot' era, so that, whereas earlier articles in this series have aimed to 'break new

ground', this article can only give an outline and refer the reader to some of the large range of books already available for the full picture.

Except where stated, details apply to both sides, the armies of King Charles and of Parliament, contrary to popular and cinematic belief, being nearly identical in organisation and appearance.

### Infantry

The infantry organisation of the New Model Army, formed by Parliament in 1644, represents the ideal aimed at. Each of its 12 regiments was to have 1,200 men in ten companies: the colonel's with 200,

Lieutenant-Colonel's 160, Major's 140, and the seven Captain's companies 100 each. A third were pikemen, the rest musketeers. Such units derived from later Dutch practice, and bore a very close resemblance to Swedish, French, or (in practice) Imperialist units of this period.

Paper organisation, however, bore even less relation to reality in the Renaissance period than later, and in practice infantry regiments could have as few as six companies, were probably more often of eight than ten, and in numbers could range from as few as 200 to a usual maximum of 800 or 900. Numbers were, as usual, affected by desertion (though there were many incidents of stubborn heroism, like the last stand of Newcastle's Whitecoats at Marston Moor, there must have been large numbers with little attachment to their commander or cause — as witness the many instances of victors enlisting their prisoners!) Raising troops was also on a particularly local, individual and haphazard basis — after all, both armies had to be hastily improvised, with only Trained Bands and veteran officers from the European wars as a basis.

Contemporary drill books such as Robert Ward's *Animadversions of Warre* tend to advocate rather complex formations based on Swedish models, but with so many un-

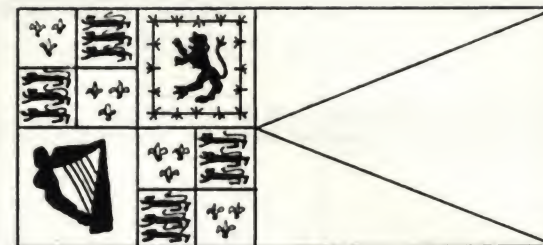
trained men, simpler tactical dispositions, perhaps based on Dutch models, were more likely to be used in practice, especially at the beginning of the war. Later there seems to have been some movement toward Swedish methods — formations only six deep, and musketeers sometimes drawn out into three ranks to give simultaneous fire by salvo (used by the New Model, and Montrose's army on the Royalist side), instead of the usual countermarch method. A regiment would form one or two 'divisions' in battle, each drawn up with pikes in the centre and shot on the flanks, though musketeers were often detached to form a 'forlorn hope' line of skirmishers, or, again Swedish-style, to support the cavalry.

Weaponry was almost standardised, though the proportions mentioned above were not always achieved; Parliament from 1643 probably came pretty near them but the Royalists, especially early in the war, had up to half some units pike-armed.

The shot were all musketeers, mostly armed with Dutch-pattern matchlocks, though a few units armed with flintlocks were raised to guard baggage and artillery trains (less likely to set fire to the open powder-barrels the gunners still favoured). These, like 'forlorns', might possibly have dispensed with the rests still employed by most musketeers.

The musketeers' protection would, at most, be helmet and buff coat, but the pikemen were supposed to have corselet and helmet (the latter likely to be an open type with a brim; the 'lobster-tail' pots' associated popularly with Parliamentarians were primarily cavalry helmets, worn by both sides). Some, like those of the Trained Bands, also wore tassets, though these, and

Royal Standard. Fleur de lys and harp gold on blue. Scots lion and border red on gold. English leopards gold on red. Tails, if present, probably red.



the gorget (now chiefly an officers' distinction) were beginning to be discarded. A sleeveless, long-skirted buff coat gave extra protection. Pikes, on issue, were 16 to 18 feet long, though often shortened by their bearers, and a cheap sword was supposed to be carried by all infantry.

Officers had partisans, sergeants and colour-guards, halberds, but these were no longer weapons of much tactical significance. Practice, again, fell short of precept, the Royalists in the Edgehill campaign, for example, largely lacking both swords and corselets, while local levies might carry clubs, bills, scythes and other improvised arms, at least until they acquired something better.

A few rifled sporting guns were also used, for sniping, mostly in the capable hands of ex-keepers and the like, but, though the far-sighted General Monck suggested, in his *Observations* that each company might well contain half a dozen snipers so armed, they were never a widely-used weapon.

### Cavalry

Regiments of horse were normally of six troops, each in theory 71 strong, but a few were larger (normally commanders' own units: Rupert's regiment had ten troops, and Cromwell's 14), and many were smaller, while the troops could, especially in the Royalist army, be understrength. Parliamentary troops were sometimes larger, those of the 11 New Model cavalry regiments being of 100 men each. In battle, the tactical unit was the squadron, normally of two troops.

The great majority of horse were of the 'light cavalry' pattern so effectively employed by Gustavus Adolphus in the Thirty Years' War, wearing corselet, buff coat, leather gauntlets and very voluminous boots. Helmet most likely of 'Dutch Pot' type, apparently sometimes with a three-barred face protector uncommon in Europe, or a steel skull cap called a 'secret' since it was worn concealed beneath a felt hat. Arms were a pair of wheel-lock pistols in saddlebow holsters, and a sword (usually a long straight 'tuck' suitable for both cutting and thrusting, but sometimes a 'Pappenheimer' or other rapier). As with infantry, troopers might lack some of these items, particularly corselets and pistols.

Such cavalry were still sometimes referred to as 'Harquebusiers' or 'Carabineers', but carbines were carried only by some officers. Light 'poll-axes' or 'horseman's axes', like those of Poles, Imperialists and others, were sometimes used, slung by a ribbon from the wrist so as to leave the hands free for the pistols.

Most successful tactics for such cavalry

were again Swedish — three-rank line formation; charge at the gallop with chief reliance on the sword; pistols used only by the front rank at the last moment, or reserved for the ensuing mêlée. The dashing, if somewhat undisciplined cavalry provided by the Royalist gentry and their retainers employed such tactics throughout the war, but in the early years the 'decayed serving-men and tapsters' of the hastily-raised Roundhead horse tended to use deeper Dutch formations, advancing at the trot or even (disastrously) awaiting charges at the halt; in both cases relying primarily on their fire.

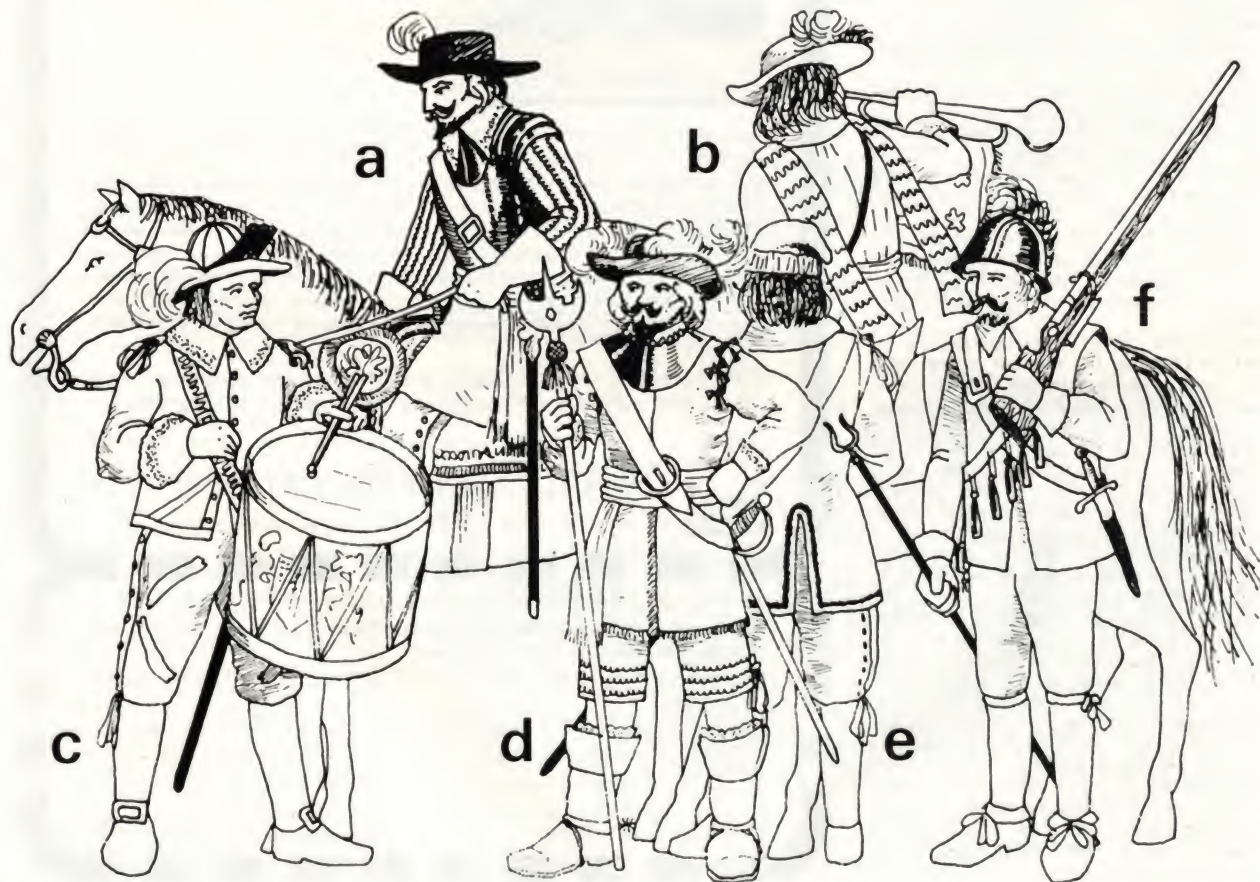
The few units of three-quarter armoured cuirassiers (the best known were Essex's Life Guard and Sir Arthur Haselrig's 'Lobsters') also naturally followed these tactics, standard for cuirassiers; as Captain Rudd stated in 1663, the cuirassier 'is commonly to give the charge upon a trot, and seldom gallopeth, but upon a Pursuit. Having spent both his pistols and having no opportunity to load again, he must then betake himself to the last refuge — his sword'.

Later, Parliamentary horse like Cromwell's 'Ironsides' adopted the new tactics, though they still sometimes charged at 'a good round trot' rather than a gallop, perhaps for better control; their superior ability to rally after a charge being the key to several victories over the Cavaliers, who in the best traditions of British cavalry, were liable to be spread all over the neighbouring countryside after a successful charge (though earlier both sides were about equal in this respect, often leaving the infantry to fight it out alone — and there were some instances of Royalists keeping in hand well enough to charge several times in the same action.)

Monck suggested that cavalry should ideally form one-third of an army, and this might be taken as a reasonable average, but there was much variation; the Royalists in particular sometimes had as much as half, even of their larger armies, mounted.

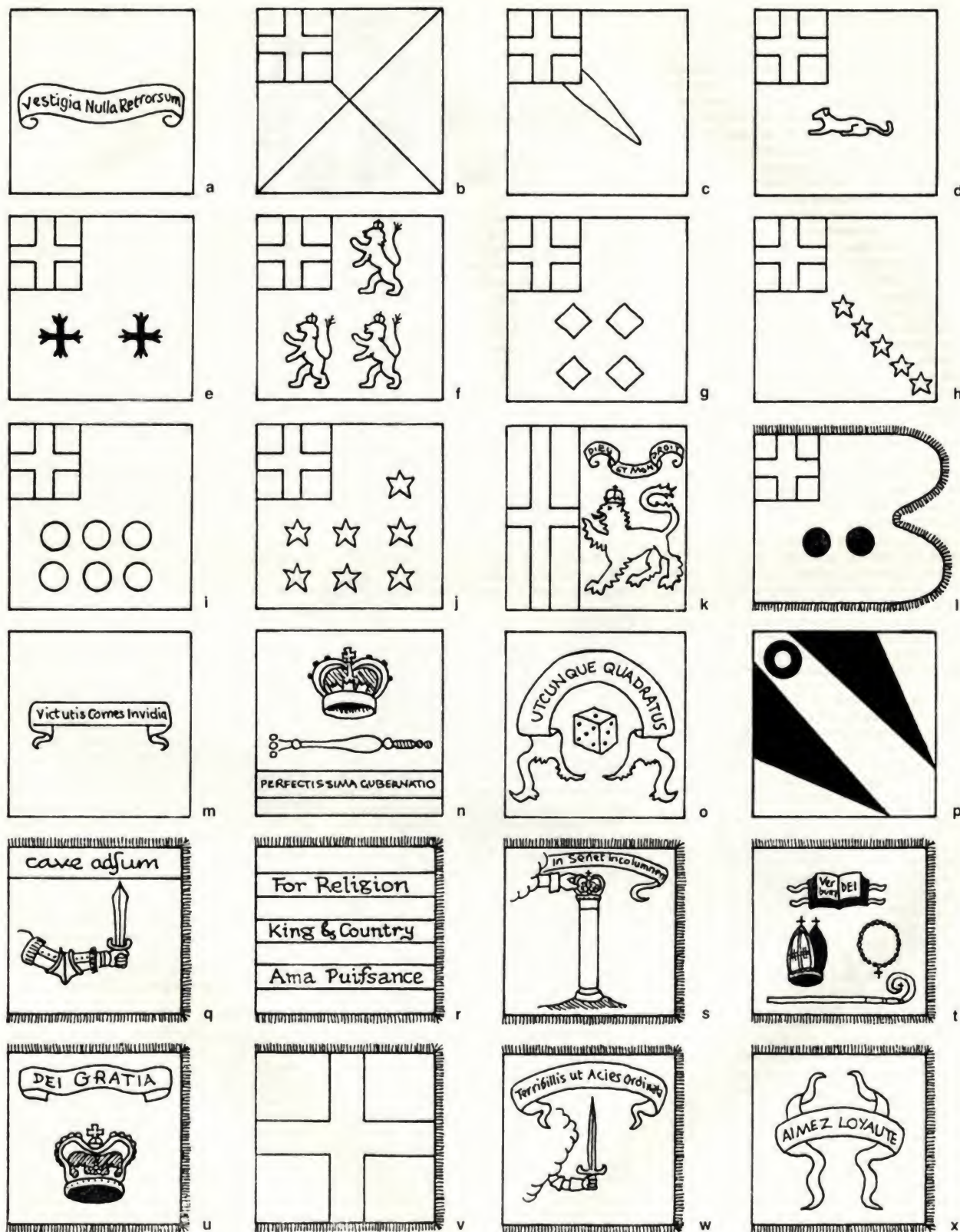
### Dragoons

A growing arm, these useful mounted infantrymen normally fought on foot, though there were instances of mounted charges, like that of Okey's Parliamentary force at Naseby. They were certainly not fit to meet real cavalry, being ill-mounted and unprotected (dressed like infantry musketeers apart from their boots and spurs), and unsuitably armed, since only officers had pistols, rankers carrying a sword, and a 'dragon' (snaphance with a 16-inch barrel) or shortened firelock musket, slung from a shoulderbelt.



**Key to drawings.** a typical cavalryman showing equipment and harness for an officer. A trooper would have plain holsters, saddle cloth and sword belt. The rather square-crowned hat is one of various types which could be worn at the time. The trousers as well as the coat would probably be leather. b cavalry trumpeter. Note hanging sleeves trimmed with lace, usual for musicians. He has a typical low-crowned, curly-brimmed hat with three plumes. Trumpet banner would probably have a similar device to the troop standard. c drummer. He wears what is probably a montero cap, a short jacket and rather long, narrow breeches, both decorated with strips of lace, as well as large bunches of ribbon at shoulder and below knee. If he was a Royalist, the drum might bear the Royal arms. d Royalist infantry officer. He wears a sleeveless buff coat, decorated with a fringe and knots of ribbon, and fashionable loose, open-bottomed, tubular breeches, with several bands, perhaps of gold lace, and ribbon knots, at the bottom. Red sash around waist. Gorget, partisan and boots and spurs indicate his commissioned rank. e rear view of typical musketeer showing back of buff coat and probable appearance of Monmouth cap. f Parliamentary musketeer, possibly of the New Model Army. He wears a plumed helmet rather than the more usual hat, and a sleeveless jerkin.





**Key to drawings Infantry flags:** a John Hampden's Regiment (Parliament): probably green. Colonel's Colour (normally plain, but could carry motto, as here). b Colonel Charles Gerard's Regiment (Royalist). Lt-Colonel's Colour (ie plain, but with St George's cross). Blue and yellow. c New Model Army — Red Regiment. Major's Colour (as Lt-Colonel, plus 'stream'). Red, white stream. d Colonel Talbot's Regiment (Royalist). 1st Captain's Colour (one device, in this case a dog, on the field). Yellow. e Colonel John Lamplugh's Regiment (Royalist). 2nd Captain's Colour (two devices). Yellow, black crosses. f Lord Saye and Sele's Regiment (Parliament). 3rd Captain's Colour (three devices). Blue, gold lions. g 2nd Regiment of London Trained Bands (Colonel Pennington) and New Model Army, White Regiment. 4th Captain's Colour (four devices). White, rose lozenges. h Sir John Gell's Regiment (Parliament). 5th Captain's Colour (five devices). Yellow, blue stars. i Tower Hamlets Regiment, London Trained Bands. 6th Captain's Colour (six devices). Red, white discs. j Lord Brook's Regiment (Parliament). 7th Captain's Colour (seven devices). Purple. k King's Life Guard. Captain's Colour. Red, gold lion etc. In all these cases, the St George's cross is red on white. It should be noted that nearly all these flags are based on written descriptions, some incomplete, and while colour and type of device are correct, there may be errors in detail or arrangement. l Dragoons — 2nd Captain's Guidon. Dragoons had fringed guidons like this, but generally following the standard infantry system. Cavalry flags: m Earl of Essex (Parliament). Cornet. Orange-tawny. Bore this motto only, but not necessarily arranged in exactly this way. n Lord Capel (Royalist). Cornet. Sceptre and crown gold, on a blue flag. o Cornet. A Royalist Captain of Horse. Very suitable for wargamers! p a Company Colour of Rupert's Bluecoats. Black and white. All had varying numbers of black rings placed diagonally running downward from the staff, and black triangles in varying arrangements. This looks as though it might be the 1st Captain's Colour. q Major Guntier (Parliament). Top yellow, flag probably red. Armour grey and gold, sword silver, hilt gold, hand flesh. r Earl of Stamford (Parliament). Blue, motto black on white. s Colonel Lambert (Parliament). Blue. Column and sleeves yellow, crown gold and red, hand flesh, motto black on white, land brown. t Major Ludlow (Parliament). Probably green. Bible white, other devices gold. u Lord Lucas (Royalist). v Royalist Cornet 1644. White, red cross, blue and white fringe (reconstructed). w Royalist Cornet. 1644. Black, with black and yellow fringe (reconstructed). x Marquis of Winchester (Royalist).

Their regiments were similarly organised to those of infantry, though the single New Model example had the officers of a cavalry regiment. This had ten companies of 100 each, but five or six companies or troops was probably more usual. Monck recommended that an army should have as many

Continued on page 548

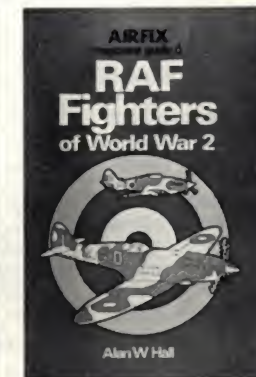
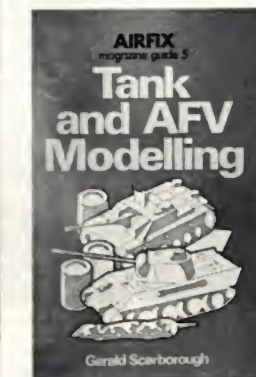
## Two more top modelling guides . . .

### No 5

## Tank and AFV Modelling

Gerald Scarborough

A natural sequel to Military Modelling (No 3 in the series) and of interest to anyone working in the popular 1:76 scale. After explaining the basics of scratch-building the author goes on to describe a number of practical modelling projects which are divided into two sections. The first is on light AFVs including the M1 Combat Car, Covenantor tank and Australian Sentinel tank, and the second on 'heavies' like the Matilda 1, American M2A1 and Russian T-35. Each conversion is fully illustrated with photos and scale drawings. The final chapter covers glass fibre and vac-formed kits, and gives display ideas.



### No 6

## RAF Fighters of World War 2

Alan W. Hall

From the famous Spitfire and Hurricane to the less well-known types, this handy reference guide for modellers and aviation enthusiasts traces the service life of every fighter to see action with the RAF during World War 2, and some that did not. It is a mine of information on the development, operations, dimensions and performance of the Mosquito, Beaufighter, Blenheim, Mustang and many others, and is of particular interest to younger modellers as it contains many contemporary photos. Both books have 64 pages, 8½" x 5½" (216 x 138 mm), and are fully illustrated. £1.20 net each (£1.33 by post)

Published in association with Airfix Products Ltd by  
**Patrick Stephens Limited**  
 Bar Hill, Cambridge, CB3 8EL. Telephone Crafts Hill 80010.

To Your leading bookseller or model shop or Patrick Stephens Limited

Please send me the following books

I enclose my remittance of £

Name

Address

Please use block capitals

A5/75



## Continued from page 547

troops of dragoons as it had regiments of horse (ie from one-fifth to a quarter the strength of the horse), perhaps because they were sometimes used to provide mobile fire-support for the cavalry, and this was roughly true of the New Model. In fact, a single dragoon troop or company was not infrequently incorporated into a cavalry regiment.

## Artillery

Civil War armies were normally provided with an artillery train, which could be large, particularly on the Parliamentary side — Essex for example surrendering 49 guns in Cornwall in 1644 — though Royalist trains usually had a smaller number of guns, often quite large. This may have been due to lack of money, Clarendon characterising the artillery train as 'a Sponge which never can be filled or satisfied'.

The largest guns employed in the field were demi-cannon (up to 36 pounder) but the saker (5½ pounder) was about the average field gun. Lighter guns such as 3 pounder 'drakes' were employed in direct support of infantry regiments, especially by Parliament, and a few multiple or battery guns were also used.

Gun teams were the usual hired civilians with farm horses (in the West country oxen were occasionally used); field guns requiring from one to nine horses. Gun crews three to nine men (latter three gunners, six matrosses — a demi-cannon crew). Gunners and matrosses were sometimes equipped with pole axes. The Royalist train of 1643 numbered 575, including 69 gunners, 88 matrosses, 200 pioneers and 44 conductors, and had 275 civilian carters.

## Dress

The only general distinguishing mark between the two sides was the use of red sashes and sometimes hatbands by the Royalists, orange by Parliamentarians, and even this was not always observed, senior officers apparently often wearing blue sashes; field-signs and field-words were thus still used for identification.

The wide-brimmed felts often worn would usually be black or grey; plumes most often black or white; stockings grey, and large lying-down collars, and cuffs, white. Coats were frequently of regimental colours (see list); trousers could be the same, and so apparently could the woollen Monmouth caps, or the Montero caps, which sometimes replaced hats and helmets. Coloured lace edging or decorating coats (like the red and blue crosses on the white sleeves of some of Newcastle's men) was already in use, and trousers often bore a broad lace strip with buttons on it down the sides. Other decorations included ribbons tying the knee of the breeches, and bunches of ribbons or rolls at the shoulder.

Linings in contrasting colours were also worn — being, for example, the sole distinction between the uniformly red-coated New Model infantry regiments; it is sometimes said that these would not normally have shown, since lapels, skirts and coat-cuffs were not yet turned back, but in that case it

is hard to account for their popularity as regimental distinctions.

Armour was oftentimes blackened; for senior officers (they often wore cuirassier armour) usually inlaid or bordered in gilt; other signs of commissioned rank included embroidered sword-belts, gold lace on hat, coat and trousers, and generally richer plumes and clothing.

## Flags

Infantry flags followed a system, used by both sides; a colour — sometimes but not always that of the regimental coats — indicating the regiment, and a St George canton being borne on all the flags save the colonels; major's company indicated by a triangular 'stream', those of the seven captains by from one to seven devices on the field, usually taken from the badge, crest or coat of arms of the colonel. Mottoes were sometimes also used, and there were some regiments (such as Rupert's Bluecoats — see illustration) which departed from the system. Infantry flags were about six feet square; dragoons carried swallow-tailed guidons which often conformed to the same system.

The cornets of the cavalry were small, square, usually fringed, and bore an extraordinary profusion of devices, mottoes, political cartoons, puns, personal crests, threats, and rude jokes! A few examples are shown.

## Figures

Here we are in the only part of the pike-and-shot period which is already a popular basis for wargames, and there is a really excellent range of lead figures available. Indeed, there are so many that it is impracticable to deal with them in detail.

Hinton Hunt, Rose and JAC make 54 mm examples, while at the other end of the scale the new and very practical wargames scale of 15 mm has good ranges available from both Miniature Figurines and Peter Laing, the latter also listing such Marlburian transport and artillery which would be suitable.

Going up the scale, Phoenix have some beautiful little 20 mm figures, a small range, but just enough for complete armies — as well, for none of the figures below will fit with them.

Of the 25 mms, the smallest are Hinton Hunt's; again enough for full armies on their own; taller, but on the slim side, a small range of Tradition figures will fit in fairly well with a similar small but nice range from Rose, or with the figures of the remaining four makers.

Of these, my own personal favourites on the whole are the new Miniature Figurines range, and this is also much the largest 25 mm selection available, but there are very good figures also from Hinchliffe, who do a substantial range including some superb artillery, Warrior, whose range is again considerable and includes guns, gunners and peasant levies, and Garrison, with a new and as yet smaller range.

There are even 25 mm 'Personality Figures' available — Warrior make Cromwell, Charles and Rupert; Hinchliffe Rupert — complete with his famous dog 'Boy!' — and

a very good Fairfax; Minifigs all these and Montrose, Leslie, Ireton and Byron. Finally, no Parliamentarian army can be complete without Warrior's splendid Puritan chaplain, caught with his mouth open in mid-harangue! By the way, Warrior, Minifigs and Garrison figures all have cast-on pikes, whereas with most of the others separate weapons of wire have to be affixed.

## Books

As an introduction to the Civil War armies, I recommend the following: *The English Civil War*, by R. Potter and G. A. Embleton (Almark); *The English Civil War Armies*, by Peter Young (Osprey); and *The English Civil War: A Military Handbook*, edited by J. Tucker and L. S. Winstock (Arms and Armour Press). All are illustrated, the first two in colour, are recent and fairly cheap.

## Regimental coat colours

### ROYALIST

**Red** King's Life Guard, Queen's Life Guard, Sir William Apsley's Regt, Sir William Saville's Regt and Prince Rupert's Firelocks (Train Guard).

**Blue** Prince Charles's Regt (Col Woodhouse), Prince Rupert's Regt (Col Sir Thomas Lunsford), Lord Hopton's Regt, Charles Gerard's Regt and Sir William Pennymann's Regt.

**Green** Earl of Northampton's Regt, Robert Broughton's Regt and Henry Tillier's Regt (last two from Ireland).

**Yellow** Sir John Paulet's Regt, Col Talbot's Regt, Sir Charles Vavasour's Regt and Sir Francis Gamul's Regt.

**Black** Sir Thomas Blackwall's Regt.

**Grey** Sir Henry Bard's Regt, Col Pallard's Regt and Thomas Pinchbeck's Regt.

**White** Earl of Newcastle's Regt, Lord Percy's Firelocks (Train Guard), Col Hawkins Regt, Sir Ralph Dutton's Regt and John Lamplugh's Regt.

### PARLIAMENTARIAN

**Red** New Model Army (different linings — Fairfax's Regt Blue linings); most Eastern Association Regts (Essex Regts — blue linings); Lord Montague's Regt (white lining); Lord Robarte's Regt, Denzil Holles' Regt, Sir Michael Liversey's Regt (of horse — blue lining), and Ralph Weldon's Regt (probably —) New Model Dragoon Regt.

**Blue** Sir Henry Cholmley's Regt, Sir William Constable's Regt, Sir Arthur Haselrig's Regt, Col Mandeville's Regt, Lord Saye and Sele's Regt, Earl of Stamford's Regt (Col Massey), Lord Hasting's Regt (Horse) and Wallers Train Guard (Firelocks).

**Grey** Thomas Ballard's Regt, Earl of Denbigh's Regt (Horse), Lord Feilding's Regt (Horse), Sir John Gell's Regt, Sir John Merrick's Regt and Simon Rugeley's Regt.

**Green** John Hampden's Regt, Col Byng's Regt, Samuel Jones' Regt and Earl of Manchester's Regt (red linings).

**Tawny** New Model Train Guard Regt (Firelocks).

**Orange** Essex's Regt.

**Purple** Lord Brook's Regt.

(Both 'grey' and 'white' may simply indicate undyed woollen cloth, and be of similar hue.) □

# NEW kits and models

## 'Revelleader'

PONTIAC'S GRAND AM is a new breed of car, and the body has never looked better than it does, hugging the chassis of Mickey Thompson's car with the awesome 500 cubic inch '426' Hemi engine capable of producing more than 2,000 bhp.

The 'Revelleader' Pontiac Grand Am bodied AA Fuel Funny Car is captured in a recent 1:16 scale kit by Revell. Detailed features include hollow rubber tyres with large rear drag slicks, Grand Am body with fully detailed substructure, more than 60 chrome parts, fuel and oil lines, ignition wires, detailed blown and injected Hemi 'Elephant' engine and authentic Revelleader decal sheet. Recommended retail price is £4.50.

## Kit catalogues

JONES BROS OF Chiswick, 56-62 Turnham Green Terrace, Chiswick, London W4, have just sent in a selection of 1975 model kit catalogues which show some mouth-watering models to come.

On top of the bundle was the 12th edition Airfix catalogue, produced in full colour as usual with 64 pages. A number of new models immediately catch the eye, some of which have now in fact been released, including the Sopwith Pup biplane, Scottish Aviation Bulldog, Spitfire VB, Westland HAS 22 helicopter (including a number of retooled parts and two new sets of transfers), Henschel Hs 123 (with new markings) F4U-10 Corsair (also with new markings), Short Skyvan and A300B Airbus; a 1927 Lincoln Roadster as the first in a new series of 1:25 scale 'American car classics'; Crusader III in 1:32 scale as the first in a new series of Series 8 AFVs; HMS *Ark Royal* in the 1:1,200 scale waterline series; a German E-Boat in 1:72 scale to accompany the existing Vosper MTB; French line infantryman in the 54 mm Collectors' Series; WW2 US Paratroops in 00/HO scale; and a PzKpfw IV and Daimler armoured car in the semi-rigid 1:32 scale military series. As is customary with Airfix, there are also some surprises in the pipeline not actually mentioned in the catalogue! Price is 31p post paid.

The second catalogue is a very attractive product from Monogram. Not having a 1974 catalogue it is difficult to pick out what is new, but in the 1:32 scale AFV series two we did notice are an SdKfz 232 armoured car and Ostwind flak tank. Price of this catalogue is 40p post paid.

Hasegawa's full-colour catalogue at 27p post paid is another difficult one to assess, the only new 1:72 scale aircraft to strike the eye being a Mitsubishi MU-2S and MU-2J. There are also some new 1:700 scale waterline ships and — tantalisingly — five

new 1:72 scale military vehicles 'to be advised'.

The Bandai '75 catalogue is twice the size of last year's and costs 42p post paid. In 1:16 scale there are a Ford Model T 1913 van truck and 1915 stake truck, both very attractive models including real wood parts, plus a 1937 Packard Convertible Coupe. For AFV fans there is a 1:15 scale Hummel, 1:30 scale Jagdpanzer IV, and 1:48 scale Austin K5 truck, Daimler Mk 1 armoured car, Matilda and Valentine tanks, some new Sherman tank variants, plus Russian KV-I, SU-85 and T-34/76. Nice one, Bandai!

Revell's new catalogue (29p post paid) is a mixture, with nothing new except in the warships line where *Scharnhorst*, *Prince of Wales*, *Gneisenau*, *Duke of York* and *USS Olympia* are all featured — but old favourites such as the aircraft carriers *Ranger*, *Enterprise*, *Essex*, *Forrestal* and *Yorktown*

seem to have disappeared.

Jones Bros' own catalogue (40p post paid) lists all their stocks of Airfix, AMT, Aurora, Bandai, ESCI, Frog, Fujimi, Lifelike, MATZ/LS, Matchbox, Monogram, Riko, Revell and Tamiya kits, as well as ESCI transfers, books, tools and materials, and is a useful purchase for modellers living miles from a decent model shop and wanting to order goods by mail.

## Revell U-47

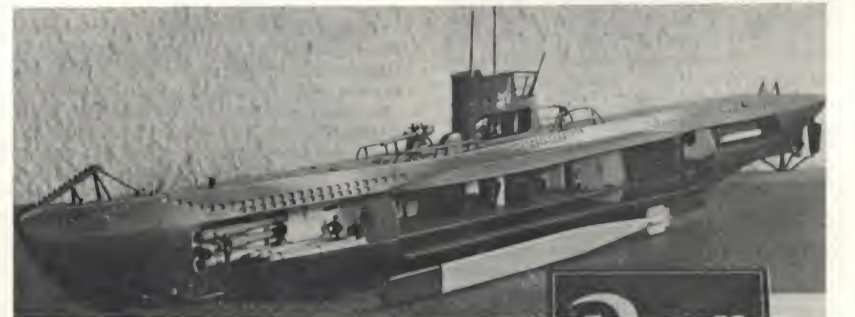
ONE OF THE two latest kits released from Revell is the 1:125 scale German U-47, from the 'Naval Vessels' series.

Under the command of Korvetten Kapitän Gunther Prien, the U-47 made a daring and successful raid on Scapa Flow, sinking the *Royal Oak* under the very noses of the Royal Navy.

All the detail of this famous submarine is captured in the 21 in long model which includes engraved deck and hull detail, anti-aircraft and 88 mm deck guns.

The second release is a cut-away hull version revealing interior detail and compartments, two diesel engines and both dynamotors, torpedoes and tubes, battery room and storage batteries, movable rudders and five working hatches. Also included are 15 crew figures and decals. The cutaway hull version costs £2.35, the solid hull model £1.75.

Below manufacturer's display model of the U-47 showing some of the interior detail. Bottom Revell's 'Revelleader' car model.







### Rub-down transfers

ALAN THOMPSON of Ren-Models, 63 Fitzroy Street, Cambridge CB1 1HF, came off the 'phone to us recently in a very excited state about a new range of Blick dry print aircraft and AFV transfers he has got in stock. The range, which appears to be manufactured by Letraset under the Blick label, currently embraces nearly 50 subjects, ranging from code letters and national insignia to pilots' personal and squadron devices and AFV divisional signs. Three examples have since come our way for review, these being sheet M15 — RAF Squadron code letters 1939-45, M30 — Luftwaffe squadron code letters and numbers, and M48 — Luftwaffe tail markings, all to 1:72 scale.

The first of these contains two large and two smaller alphabets printed in Sky plus two small alphabets in grey. The second contains two complete alphabets, with extra characters for the most commonly used letters, plus four lots of numbers one to nine and zero, in three styles: yellow, black, and yellow with a black edge. The third contains tail markings for 12 Bf 109s and three FW 190s from a variety of theatres and periods of the last war, including the squadron badge and 'kill' marks, each aircraft being identified by a caption underneath the transfers. In each case the outline of the rudder is also drawn in to ensure correct positioning on the model.

An accompanying instruction sheet with each set shows two alternative methods of applying these transfers, which need more care than the traditional water-soak type since, once in place, they cannot be shifted around. This means they must be correctly aligned before rubbing down. However, their beauty is that they really do give a professional 'painted-on' look to a model.

A full list of available sheets can be obtained from Ren-Models at the above address, and the price of each is 54p.

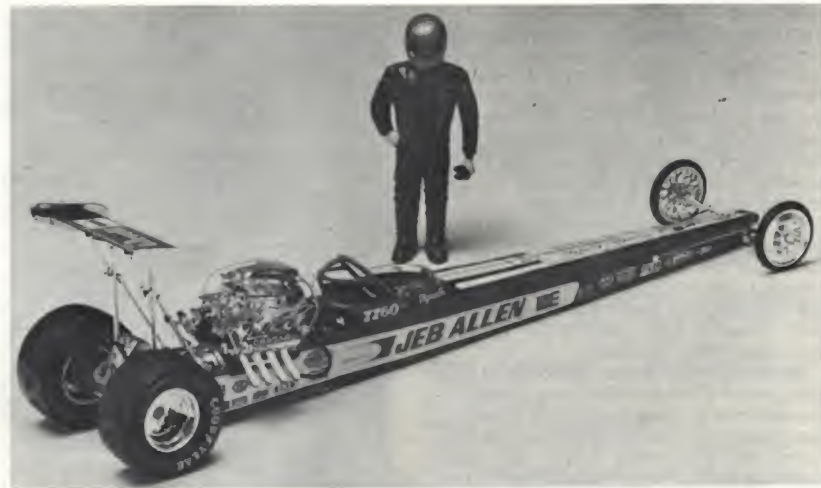
### Dragster

THE GROWING enthusiasm for drag racing and the commensurate growth in interest for dragster kits, has led up to the release of

a new 16¼ in long rear-engined dragster kit from Revell.

The model is a 1:16 scale 'Praying Mantis' AA/FD rail as driven by Jeb Allen in the USA, and has many detailed features. Great attention has been paid to the cockpit interior, rail chassis and the blown and injected 426 'Hemi' engine, which is complete with plug leads, magneto drive and even movable throttle butterflies. The model also features turntable front wheels, detachable body panels, rear spoiler, drag 'chute pack and hollow rubber 'slick' tyres.

For the first time, Revell have included a driver model in this kit, which is, of course, Jeb Allen, complete with helmet and clear screen visor. Although only 18 years old, Jeb has become a big hit with the youth element of US drag racing fans. He is the youngest top fuel driver in the USA, but his age in no way limits his skill and he is a consistent six second runner. His best elapsed time to date has been 6.33 seconds for the standing quarter of a mile, at the end of which 'Praying Mantis' was doing 243 mph!



Tamiya have quite a reputation for producing kits and the 1:35 scale Italian Carro Armato M13/40 recently received for review will do nothing to tarnish that reputation. Quality of moulding, neat fit of parts, accurate detail and clear instructions — everything about this one is right. And what a change to have a model of this important Italian tank which was used so much in North Africa! Admittedly it was not a brilliant design in either armour or performance, and was also difficult to get into and cramped and stuffy when you did mount up. In spite of its drawbacks it performed useful service with its 47 mm gun, and captured vehicles were used, dug in, during the defence of Tobruk by Australian and British units — and typical Kangaroo transfers are included on the comprehensive decal sheet.

If you have an interest in cars and 16¼ in of space to spare, you could hardly do better than build this model of a car which on its first entry into a national drag race, took the award for best appearance. The kit retails at £3.90.

### SU-85

FUJIMI HAVE ADDED yet another superb model to their 1:76 scale range of AFVs with this kit of a Russian SU-85 tank destroyer. Based on the famous T-34 chassis, the SU-85 was similar in appearance to the German Jagdpanther and, like most self-propelled anti-tank guns of the Second World War, was an improvised means of mounting a heavier gun on a tried and proven chassis. Later, of course, a larger revolving turret mounting an 85 mm gun was fitted to the T-34, at which time the SU-85 was similarly up-gunned, producing the SU-100.

Fujimi's kit, which costs 60p, is moulded in dark olive green plastic with the now cus-

Continued on page 552

# MODEL TIONS

## PLASTIC KIT SPECIALISTS—ASSOCIATE MEMBER I.P.M.S.

HASEGAWA AFV KITS				FUJIMI AFV KITS				HASEGAWA A/C KITS				FROG A/C KITS			
1. Willys Jeep	1/72	40p		T-34/76A	1/76	60p		Lockheed T-33A	1/72	40p		F6F-3 Hellcat F.Mk.I	1/72	21p	
2. 155 mm. M.2 Gun	1/72	40p		Valentine	1/76	60p		Curtiss SO C-3 Seagull	1/72	40p		Macchi MC 202	1/72	21p	
3. Stuart Mk. I	1/72	40p		M4A3 Sherman	1/76	60p		N.A. F-86F Sabre	1/72	40p		H. Typhoon IB	1/72	45p	
4. M3 Lee Mk. I	1/72	40p		PzKpfw 38(t)	1/76	60p		Heinkel HE-51 A-1	1/72	40p		D.H. Gypsy Moth	1/72	45p	
5. M3 Grant Mk. I	1/72	40p		88 mm Gun and Crew	1/76	60p		F-5A Freedom Fighter	1/72	40p		G. Gladiator	1/72	45p	
6. M3A1 H.Track	1/72	40p		Matilda I II	1/76	60p		T38A(F-5B)Talon	1/72	40p		Fokker D.21	1/72	45p	
7. M4A-1 H.Track	1/72	40p		Tiger II	1/76	60p		A6M3 Mod 22 Zero	1/72	50p		Supermarine S-6B	1/72	45p	
8. Tiger I.E.	1/72	40p		Russian KV-II	1/76	60p		A6M3 Mod 33 Zero	1/72	50p		Heinkel HE.162	1/72	45p	
9. Panther G.	1/72	40p		Jagd Panzer Hetzer	1/76	60p		Heinkel HE.51 B-2	1/72	50p		Wildcat Mk. IV	1/72	45p	
10. 88 mm. Flak 18.	1/72	40p		Russian KV-1A	1/76	60p		C. Seagull Floatplane	1/72	50p		Hurricane IIC	1/72	45p	
11. Sd. Kfz. 7 H.Track	1/72	40p		Jagdtiger	1/76	60p		Cessna A-37A	1/72	50p		ME.Bf 109F	1/72	45p	
12. Kubelwagon and BMW Combination	1/72	40p		Sd. Kfz. 251/1/10 Hanomag	1/76	60p		Bell UH-1D Iroquois	1/72	50p		D.H. Vampire FB.5	1/72	45p	
13. Schwimwagen and Kettenkrad	1/72	40p		Sd. Kfz. 222 A. car	1/76	60p		MIG-17E/D 'Fresco'	1/72	50p		Spitfire 8/9	1/72	45p	
14. Sd. Kfz 7/1 with 4AA	1/72	40p		Kubelwagon and BMW R75 Combination	1/76	60p		P-47D Razorback	1/72	50p		P-40B Tomahawk	1/72	45p	
15. M-4 (A38B) Sherman	1/72	40p		Elephant	1/76	65p		P-47D Bubbletop	1/72	50p		P-51A Mustang II	1/72	45p	
16. TX-40 Fuel Truck	1/72	40p		British Infantry	1/76	60p		S. Spitfire Mk. I	1/72	55p		Messerschmitt ME410	1/72	55p	
17. Toyota Starter Truck	1/72	40p		German Infantry	1/76	60p		P-51D Mustang	1/72	55p		Swordfish Mk. I	1/72	55p	
18. Sd. Kfz 7/2 37 mm. AA	1/72	40p		Tents, Oil Drums, Walls, Sandbags	1/72	60p		Ki-44 Shoki (Tojo)	1/72	55p		D.H. Hornet F.3	1/72	55p	
19. M-24 Chaffee	1/72	40p		SU-85	1/72	60p		Ki-61 Hien (Tony)	1/72	55p		ME 262A	1/72	55p	
20. G.M.C. Personnel C.	1/72	40p		T-34/85	1/72	60p		H.S. Harrier Mk. I	1/72	60p		Hunter FGA.9	1/72	55p	
21. G.M.C. Gas Truck	1/72	40p		MODAKIT VACFORMS	1/72	40p		BAC Lightning 6	1/72	60p		Sea Venom FAW 21	1/72	55p	
22. G.M.C. Dump Truck	1/72	40p		Nissen Hut	1/72	40p		Aichi E 13A 'Jake'	1/72	60p		G. Gannet AS.1/4	1/72	55p	
ESCI AFV KITS				Blister Hangar	1/72	41.02		F-104G Starfighter	1/72	60p		P-38J Lightning	1/72	55p	
PzKpfw III	1/72	55p		Control Tower	1/72	78p		G.OV-10A Bronco	1/72	60p		F. Barracuda Mk. I	1/72	55p	
Sd. Kfz. 251/1 Hanomag	1/72	55p		2 German W.W.I. A7V Tanks	1/76	40p		Fuji T-1A Trainer	1/72	60p		Spitfire XIV and V.I	1/72	55p	
PzKpfw II	1/72	55p		Panzer PzKpfw 38 (t) and Westphalia	1/76	65p		G.OV-1A Mohawk	1/72	60p		Junkers JU-87G	1/72	55p	
Wespe	1/72	55p		Cromwell 4 and Centaur A.A.	1/76	65p		G.OV-1B Mohawk	1/72	60p		G. Meteor F. Mk.4	1/72	55p	
Hetzer	1/72	55p		4 VV. Kubelwagens	1/76	65p		D-4AE F3 Skyhawk	1/72	60p		G. Avenger II TBF. I	1/72	55p	
Marder III	1/72	55p		2 King Tigers. 1 each	1/76	65p		F-5A Freedom Fighter	1/72	40p		P-47D Bubbletop	1/72	55p	
HELLER A/C KITS				Porsche/Henschell Tur. Modellers Pack, contains Planked and Canvas Textured sheets	1/76	40p		R.F. 105D Thunderchief	1/72	75p		F-100D S.Sabre	1/72	60p	
Me. Bf 109F	1/72	30p		L.S. A/C KITS	1/72	85p		Type 94-1 'Alf'	1/72	75p		Skyhawk A4H/K	1/72	60p	
Morane 225	1/72	30p		K5Y2 Willow F/Plane	1/72	85p		Mitsubishi MU-2J	1/72	77p		BAC Lightning F6	1/72	60p	
Amiot 143	1/72	99p		Peggy Heavy Bomber	1/72	1.40		Mitsubishi MU-2J	1/72	77p		N.A. Mitchell II	1/72	60p	
Breguet 693	1/72	99p		Ki-67 Torpedo Bomber	1/72	1.40		F.15 Eagle	1/72	77p		Tupolev SB2	1/72	65p	
Potez 63-11	1/72	99p		M.G.31 'Nell'	1/72	95p		G.A6A Intruder	1/72	95p		M. Maryland	1/72	65p	
Potez 540	1/72	99p		M.G.31M 'Nell'	1/72	95p		F-4E Phantom	1/72	1.10		BAC Jaguar A2/T2	1/72	65p	
Liore et Oliver 45	1/72	99p		'Nell' Transport	1/72	95p		F-106A Delta Dart	1/72	1.10		Dornier 335 A-6/A-12	1/72	65p	
Leo 451	1/72	99p						F-102A Delta Dagger	1/72	1.10		Beaufighter Mk. 21	1/72	65p	
Bloch 210	1/72	1.40						R.A.C. Vigilante	1/72	1.10		Buccaneer S.2A	1/72	75p	
WILLIAMS BROS A/C KITS								L. P2V-7 Neptune	1/72	1.65		Dornier DO-172-2]	1/72	75p	
Martin B-10B	1/72	1.20						M. G4M1 Betty, with Baka Bomb	1/72	1.95		V. Viny Mk. IV	1/72	75p	
Boeing 247	1/72	1.20						GBNI 'Rita'	1/72	1.95		G. Javelin FAW 9/9R	1/72	75p	
								Emily Flying Boat	1/72	2.00		Canberra B(1) Mk.8	1/72	75p	
								H6K5 Mavis Flying Boat	1/72	2.00		RF-101 Voodoo	1/72	75p	
								Boeing B-47E	1/72	2.00		L. Neptune	1/72	1.55	
								Shinmeiwa PS-1 or SS-2	1/72	2.75		Heinkel HE-111	1/72	1.15	
								SP-5B Marlin	1/72	2.75					
								Curtiss BF2C-1	1/72	3.35					
								Boeing F-4B-4	1/72	3.35					
								ME. 163 Komet	1/72	3.35					
								ME. BF109E	1/72	3.35					
								F.V. 190A	1/72	3.35					
								P-51D Mustang	1/72	3.50					
								P-26A Peashooter	1/72	3.75					
								N. Ki43 Oscar	1/72	4.25					
												</			



tomy excellent detail and lack of flash. All parts fit easily, making assembly a joy. A commander figure is provided and the two superstructure hatches can be cemented in either open or closed position. Unfortunately, the driver's hatch is moulded integrally with the hull and can only be opened by very careful cutting from the inside before assembly.

The very clear instruction sheet (despite some of the traditional 'odd' English) includes diagrams showing how to make radio aerials from stretched sprue and towing wires from electric flex. Two sets of markings for fairly typical machines are provided, and this kit should find a welcome in the homes of all those military modellers who have long lamented the lack of variety in available models of Russian armour. Our sample was provided by Ren-Models of Cambridge who can supply by mail.

### T-34/85

SECOND NEW Russian AFV offering from Fujimi in 1:76 scale, this kit depicts the successful 85 mm gun-armed version of the T-34 which is still in service with several Warsaw Pact and Middle Eastern countries today. Like the SU-85, it is cleanly moulded in dark green plastic and fits together well. The commander figure in our sample has a rather unfortunate 'shell hole' in the middle of his chest, easily filled with body putty, but this is our only criticism of an otherwise excellent kit. Price is 60p again from Ren-Models of Cambridge.

### Aircraft carriers

THE TWO LATEST 1:700 scale waterline series kits to reach us under the Hasegawa label depict the wartime American carriers *Essex* and *Hancock*, 'short' and 'long' hull versions respectively of the 'Essex' Class ship. The only place where the two kits differ, in fact, is in the hulls and boxtop artwork, an obvious tooling economy since common sprues of parts for the flight decks, superstructure etc can then be — and have been — moulded. Even the instruction leaflets are virtually identical!

Both models are moulded in dark grey plastic with the customary separate dull red lower hull part as a separate item in case a full-hull instead of a waterline model is required, plus the usual strip of lead to weight a full-hull model so that it floats correctly in the water.

Moulding detail is excellent, down to the criss-cross grid effect of the metal floors on the AA gun turrets, and a positive fleet of aircraft — Hellcats, Corsairs, Helldivers and Avengers — though how one paints on the intricate markings shown in 1:700 scale we don't know!

Both of these kits can be highly recommended to all model warship enthusiasts and are very reasonably priced at £2.45 each. Our review samples came from Ren-Models of Cambridge.



**Tank Battles in Miniature 2: A wargamers' guide to the Russian Campaign 1941-1945**, by Bruce Quarrie. Patrick Stephens Ltd, Bar Hill, Cambridge CB3 8EL. Price £3.95.

THE RUSSIAN FRONT was the scene of the largest armoured battles of the Second World War, and thus is a natural choice for the second volume in this series (number one was *Tank Battles in Miniature: A wargamers' guide to the Western Desert Campaign 1940-42*, by Don Featherstone).

Jam-packed with descriptions of what conditions on the Russian Front were really like, pages of technical specifications on the tanks, armoured cars, half-tracks, trucks, guns and aircraft used, and full details on the best ways of recreating Eastern Front tank battles in miniature, this book could well become a standard reference on military operations in this theatre as well as the wargamers' guide to the period.

The book begins with a preliminary chapter on recreating the battles in miniature using, primarily, 1:300 scale micro tanks, and includes basic ground, time and movement scales. It then goes on to give a graphic account of what Russian Front warfare was really like as seen from both sides, and a concise but detailed account of the course of the actual campaign, illustrated by several maps. Chapters on the organisation, equipment, state of training and morale of the German and Russian armies follow, accompanied by numerous unit organisation charts. Tactics also come in for some discussion here.

Chapter 6 describes the wide variations in terrain and climate found in European Russia, and ways of recreating these in wargames. There are also useful tips on modelling 1:300 scale terrain and buildings. The next chapter discusses the vital questions of lines of communications and supply, and this is followed by what will undoubtedly be, for many people, the most valuable section: a complete breakdown, with performance, crew, armament and armour thickness statistics, of all the major tanks, armoured cars, half-tracks and trucks used by both sides, with notes on their comparative effectiveness where appropriate. The chapter is concluded by a table giving hull and turret front, rear and side armour thickness classifications for wargames use.

Logically, this is then followed by a chapter on firing tank and anti-tank guns both in real life and on the wargames table, which includes such useful information as the armour piercing capabilities of the various guns deployed by both sides, and the amount of ammunition carried by the differ-

ent vehicles represented in a chart listing number of wargame Moves' fire for each. It also includes descriptions and some discussion on the merits of different types of anti-tank ammunition.

The book then goes on to consider air strikes against ground targets, dog-fights and anti-aircraft fire from the ground. Performance statistics for the main types of aircraft used by both sides are given, together with playing rules designed to enable wargamers to add a genuine third dimension to their games using model aircraft manoeuvred over the table.

Subsequent chapters consider such varied subjects as armoured trains, infantry movement and firepower in real life and in wargames, infantry support weapons (artillery and self-propelled guns), partisans and guerrilla warfare, tank recovery and maintenance, minefields and dragons' teeth, and board wargames as a means of re-enacting the entire campaign. The book is concluded by an appendix listing availability of model vehicles, a bibliography and index.

It can thus be seen to be virtually a complete guide to every aspect of Russian Front warfare and wargaming, with the accent very much on playability and realism — a difficult combination which this book succeeds in putting across. For anyone interested in the Russian theatre of operations, therefore, a definite 'must'.

### Anzio

AVALON HILL have now issued a revised edition of their old 'Anzio' game with several alterations, including the elimination of the basic game, the introduction of air and sea support, and new victory conditions. Although the playing counters are also new, the map board is the same.

The Anzio campaign was a bitter struggle from one armoured line to the next, slow-moving but for bursts after a line was breached, and dominated by the terrain. In this context, the main virtue of this game is also its downfall: it is realistic.

The rules are sensible, if overlong and improperly indexed, and include provisions for second combat, breakthrough and automatic victory, which blunt some rougher edges of non-simultaneous movement. As usual, Avalon Hill's board is solid and better marked than those supplied with SPI games, but, of course, you pay for this. Combat is resolved by step-reduction, with units losing strength gradually before being destroyed: a system with obvious attractions, but the disadvantage of up to six counters of varying strength for each unit. Hunting these out initially can take up to an

hour — so have two dozen seed envelopes to keep them in!

Overall, however, we cannot recommend this game, since despite obvious care and effort, the designers were defeated by the geography and campaign. Italy is long and thin, the Germans can only establish an armoured line on the many suitable Apennine ranges and swamps, and wait for the numerically superior Allies to batter at them turn after turn. Boring!

Anzio is available from Avalon Hill Games, 646-8 High Road, North Finchley, London N12 0NL, price £5.65 including postage.

### Strategy & Tactics

THE LATEST ISSUES of this excellent wargames magazine to reach us (Nos 46-48) are all strictly for the 'modern' enthusiast. Number 46 contains two major articles dealing with the period, one to introduce SPI's new game, 'Patrol', the other covering combined arms tactics from 1939 to the present day. The game with the magazine is 'Combined Arms' and covers, in six scenarios from 1939 to 1973, the combined tactical use of armour, infantry and artillery. Common counters, rules and hex map are used together with a Unit Values chart giving separate data for each scenario. Once the simple mechanics of the game have been mastered, it provides an absorbing game that you will want to play again — and again.

Number 47 is primarily concerned with U-Boat warfare, and includes a major feature article on the German submarine war in the North Atlantic 1939-43 as well as a simulation game, 'Wolfpack'. For a change this is a solitary game, with one player controlling both forces within the restrictions provided in the rules.

The third feature in No 47 is, surprisingly, a rather shallow analysis of the potential for global war in the '70s which does not present anything really new in terms of information and is somewhat inconclusive in its arguments.

Issue number 48 contains a major feature article on US/Soviet naval operations in the Mediterranean in the 1970s plus a simulation game on the same subject, and a second feature article entitled 'Global War — The war against Germany and Japan 1939-45'. The first article on naval operations is extremely good, investigating such topics as Mediterranean politics and the development of Soviet naval power, scenarios for a Mediterranean war, naval forces in the Med, ships of the Mediterranean powers, aircraft and missiles deployed, naval tactics, sub-hunting, first strikes and Mediterranean ground forces.

The second article is another of those which seem to be creeping into S&T more and more these days, which tries to cover too much ground in too little space to be of much practical value to anyone. It's basically a potted history of the Second World War with an emphasis on the economic aspects.

*Strategy & Tactics* is available from Simulations Publications UK, Freepost, Altrincham, Cheshire WA15 6BR, price £4 for six months' subscription (three issues) or £7.50 for a year (six issues).

May 1975



### Modelling

**Airfix Magazine Guide 5: Tank & AFV Modelling**, by Gerald Scarborough. Patrick Stephens Ltd, Bar Hill, Cambridge CB3 8EL, in association with Airfix Products Ltd. Price £1.20.

A NATURAL SUCCESSOR to Gerald's earlier title in this series of budget modelling books (No 3: *Military Modelling*), this 64-page hardback covers the basic techniques of scratch-building 1:76 scale tanks and other armoured fighting vehicles using plastic card, rod, sprue and oddments from the spares box.

Scale plans, construction diagrams and numerous photographs illustrate several step-by-step modelling projects, ranging from the tiny Loyd Carrier and Light Tank Mk VIA through the American M1 Combat Car, British Covenantor I cruiser, Australian Sentinel cruiser, British Infantry Mk 1, American M2A1 and German Hummel to the massive Soviet T-35.

Additional notes on vacuum-formed and glass fibre tank kits, model photography and miscellaneous hints and tips make this book invaluable for all modellers specialising in the popular 1:76 scale.

**Airfix Magazine Guide 6: RAF Fighters of World War 2**, by Alan W. Hall. Patrick Stephens Ltd, Bar Hill, Cambridge CB3 8EL, in association with Airfix Products Ltd. Price £1.20.

THIS VERY HANDY reference book will appeal to all younger modellers interested in RAF fighters of the last war, and will also be useful as a quick reference source for more experienced modellers and aviation enthusiasts.

It begins by describing the RAF's aircraft in the immediate pre-war period, then goes on to discuss the tremendous technological leaps which took place during the five years of the Second World War.

The main section of the book is devoted to an alphabetical listing of all types to see service with the RAF, including the Beaufighter, Blenheim, Defiant, Gladiator, Hurricane, Meteor, Mosquito, Spitfire, Tempest, Typhoon, Whirlwind, Airacobra, Buffalo, Mustang, Tomahawk, Kittyhawk and Thunderbolt, as well as one projected fighter which never got off the ground — the Welkin — and one which arrived just too late to see active service during the war — the Vampire. Each type's development and service history is described in concise detail, major marks and variants are all illustrated in the many black-and-white photos, and each description is followed by a data table listing

dimensions and performance characteristics.

A truly tremendous amount of information has been packed into this book's 64 pages making it an exceptionally good buy at only £1.20.

**Modelling Miniature Figures**, edited by Bruce Quarrie. Patrick Stephens Ltd, Bar Hill, Cambridge CB3 8EL. Price £3.75.

CONCEIVED AND PRODUCED as an essentially practical book on miniature figure modelling, unlike other books which concentrate on the collecting aspect, this really is the first English language guide to all aspects of making model soldiers and other figures in all the most popular materials and scales.

Part one deals with plastic figures, ranging from the tiny 00/HO types made by Airfix, Atlantic and others, through 54 mm models in polythene, PVC, acetate and polystyrene (such as the Historex and Airfix kits) to large scale types (primarily the Airfix 1:12 scale series). However, although Airfix have been mentioned three times so far, this is not an 'Airfix' book, as part two goes on to prove.

This deals with metal figures ranging, once again, from the wargames 20/25 mm ranges of Miniature Figurines, Hinchliffe etc, through 30 mm 'diorama' models to 54 mm 'solid' and 'hollow' types and the even larger 75, 77, 90, 120 and 135 mm collectors' items. Each chapter in these two sections deals not only with the types of model available, tools and materials, animation, painting and display, but also includes at least two (and in some cases many more) practical, step-by-step conversion projects. Typical figures which are described include a French First World War pilot (from Historex parts), SS cavalryman (from Airfix parts), 18th Century Polish Lancer (30 mm metal), Byzantine Emperor (25 mm metal) and a Napoleonic Bavarian light infantryman (54 mm metal), though these are just a selection from the many others included.

Part three of this book is a miscellaneous section covering such diverse topics as home casting, horse animation, carving figures from wood and making dioramas, and it is completed by an appendix listing most of the main model figure manufacturers and suppliers inside and outside the UK.

Contributors to this book, which looks all set to become the standard work on the subject, read like a 'who's who' of modelling, and include Sid Horton, Cesare Milani, Roy Dille, George Gush, Martin Rendall, Robert Gibson, Bill Hearne and Donald Featherstone. All are acknowledged experts in their own fields and experienced authors as well as modellers, making the text very



easy to follow and providing hours of fascination for figure modellers of all ages.

There are numerous line drawings in the text illustrating specific techniques or conversion projects, and 32 pages of photographs illustrating models both in construction and finished. Definitely not a book to be missed!

**How to make model aircraft**, by Chris Ellis. Hamlyn Publishing Group, Hamlyn House, 42 The Centre, Feltham, Middx. **Price £1.50.**

ALTHOUGH THIS is a beautifully produced book its value to the serious modeller is open to considerable doubt.

The author is, of course, well-known in modelling fields, if not so much for his aircraft modelling, certainly for his AFV and warship activities, and his shortcomings in the former become very apparent.

The book does not go into any great detail as far as turning the average plastic kit into a scale model is concerned and most of the contents have appeared in one form or another in other publications. This also applies to the photographs which most serious modellers will already have seen if they have followed the author's various travels around the magazine publishing business.

After reading the book one is left with a feeling that a lot more thought could have been given to the content and coverage, which is typified by the section on air brushing. This is a skilled and tricky operation and to dismiss it in four pages illustrated by manufacturer's hand-out photographs and rather vague line drawings, adequately sums up the theme of the whole publication.

The very newcomer to the hobby might well find the book of interest and if it helps to attract more to the hobby, as well as encourage younger modellers to look further afield, it will have served a useful purpose. But the average reader of this magazine will find little of interest in the 80 pages.

**The Know How Book of Flying Models.** Usborne Publishing Ltd, 20 Garrick Street, London WC2E 9BJ. **Price £1.30** (hardback) **75p** (paperback).

IN ALL THINGS you have to start somewhere, and most people's first attempts at a model is a paper dart. In the new 'Know How' series from Usborne there is a book on just that — paper and card models which really fly. They range from the simple dart ballasted with a paper clip to complicated kites and rubber-band powered missiles and launchers. There is even a hang glider made from drinking straws and a polythene bag. Colour pictures throughout, and clear, simple instructions make this ideal for the younger would-be aeromodeller.

**Collecting Model Soldiers**, by John G. Garratt. David & Charles, South Devon House, Newton Abbot, Devon. **Price £3.50.**

THIS IS RATHER John Garratt on the same old theme and ideas previously expressed in *Model Soldiers: A Collector's Guide* and *Model Soldiers for the Connoisseur* than a new book, despite its title. Books on the

'collecting' aspect of the hobby are now two a penny, and apart from the fact that Mr Garratt mentions some of the relative newcomers on the field missed from his previous books, this one tells us nothing we didn't know before. A harsh conclusion which we did not enjoy making but is true.

However, since this is the most up-to-date book on the subject, if you're a newcomer to the hobby, then it would be a good purchase. The book is well written in Mr Garratt's usual style and very readable, but there are only 33 photographs, most of which attempt to show too much to show anything at all. Still, 187 pages for £3.50 is good value by today's standards.

**Modern Aeromodelling**, by R. G. Moulton. Faber & Faber, 3 Queen Square, London WC1N 3AU. **Price £2.50.**

THIS IS A new edition of Ron Moulton's well-known book on flying model aircraft originally published in 1963, and although of limited value to scale modellers will be invaluable to all newcomers to the complexities of 'working' models, whether rubber-powered, control line or radio controlled.

Individual chapters cover such topics as the range of models available, tools and materials, motive power sources, free-flight models, control-line flying, radio control, scale flying models, competitions, construction techniques, covering and finishing, and, most important, repairs.

The book is very well illustrated, extremely cheap considering the ground it covers, and altogether excellent value for anyone beginning in this hobby or experiencing the usual beginner's disasters.

## Aviation

**Civil Aircraft of the World**, by John W. R. Taylor and Gordon Swanborough. Ian Allan Ltd, Terminal House, Shepperton, Middx. **Price £2.75.**

HERE, IN THIS new edition of an old favourite, you will find useful salient details of just about everything civil that flies, from Argentinian Aero Boeros to Czechoslovakian Ziins. For the first time, the major types of civilian-operated helicopters are also included though, sadly some may say, the Bristol Freighter, Britannia and the Constellation have been retired. Amazingly, however, the DC3 lives on, and justifiably so.

Whether your interest in civil aircraft is as a spotter, model maker, professional aircraft engineer or simple enthusiast, this nicely produced, quality volume is good value for the pictures alone (eight pages of them are in colour). You can check and compare specs, drool over what you'd buy if you had the cash (we fancy the eight-seat Gates Learjet 24D), or simply browse. There's also a useful index, and the test data has been metricated, but those who can still only think in ft, in, lb, mph and miles need not worry for both systems are used.

## Naval

**Carrier Operations in World War II**, by David Brown. Volume 1: The Royal Navy.

**price £3.75**; Volume II: The Pacific Navies, **price £3.95**. Ian Allan Ltd, Terminal House, Shepperton, Middx.

VOLUME ONE of this pair originally appeared in 1968 (then at a price of 37/6!) and immediately provided a valuable and authoritative guide to the operations of the Navy's carriers during the last war, and, incidentally, to the flying activities of the embarked squadrons of the Fleet Air Arm.

Both the narrative, the tables and appendices and the photographs have provided much useful information and browsing delight to its readers. This volume has now been revised and completely re-set, giving David Brown the opportunity of correcting the few errors he subsequently found and to revise the photographs, bringing in some new ones.

Volume Two deals with the Japanese and US Navies in their epic struggles in 1941 and 1942 and follows much the same format and layout as Volume One, providing a handy pair of study and analysis of carrier operation. This volume, too, has some very rare and fascinating photographs and both of them are to be commended to lovers of ships and aircraft alike to whom they can be very profitable.

## Military

**Jane's Infantry Weapons 1975**, edited by Major F. W. A. Hobart. Janes Yearbooks, Macdonald & Janes, Paulton House, 8 Shepherds Walk, London N1 7LW. **Price £19.50.**

EVERY SO OFTEN there appears on every book reviewer's desk a book that is really something special. One of these rare occurrences happened recently when the massive *Jane's Infantry Weapons 1975* was passed over for the usual comments. Over the years we have come to rely on the 'last word' *Jane's Fighting Ships and Aircraft* and now the same attention to detail and thoroughness that has made those two works the last word on their subject has been turned to the complicated world of the infantry weapon.

As this is the first of what we hope will be many more volumes on the topic this review will go a bit deeper than most. The first impression is one of sheer bulk. The book measures 13 x 8½ x 1½ inches and weighs a hefty 8 lbs. There are over 850 pages and most pages carry at least one illustration. Print and picture quality are good and a good quality paper has been used.

Now for the content. The book starts with a very comprehensive article on small arm ammunition and then goes on to the separate sections. The first section is devoted to pistols and revolvers. A look at this section will give an idea of the format of the other sections. It starts with a short summary of the basics of revolvers and self-loading pistols. After that each nation's output is examined and the relevant data is given for nearly every pistol mentioned. Most pistols are illustrated by at least one clear photo and there are many cut-away drawings. Just about every pistol used during the present century is mentioned and thus such antiquities as the Mauser C96 get a mention as

well as such modern developments as the SIG P230. In between are such old favourites as the Enfield pistols and the section on Smith & Wesson revolvers is exceptionally comprehensive.

After the pistols there come sections on sub-machine-guns, rifles and machine-guns, all of which are very detailed and omit nothing of the large and varied weapon inventories of the last 50 years. Then comes a separate part on Area Weapons which covers grenades and mortars. It was in this section that we found one or two omissions, due mainly to the fact that the Swedish mortar manufacturers do not seem to have wished to be included. But the omissions are minor and are not really noticeable. A further separate part deals with anti-aircraft and anti-tank weapons used by infantry.

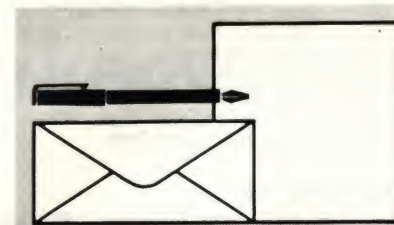
A further part gives a most useful breakdown of the infantry weapons in service with every state that has an army. Thus one can discover at a glance that Gambia uses Enfield pistols, the Sterling smg and the Bren. Singapore uses Tampella mortars and the M16 rifle, and so on.

The depth and coverage of this work is really quite staggering. We were prepared to find a good coverage on modern weapons but we were not prepared for the large coverage of most of the weapons used in the 20th Century. While we expected to find a good coverage on such items as the Stoner machine-gun system it came as quite a surprise to see a comprehensive mention of the ancient Schwarzlose machine-gun still in use with the Frelimo guerrillas. This wide coverage is the book's major asset for here in these pages are all the facts and detail anyone is ever likely to want to know about any weapon likely to be encountered — there is even a picture of an IRA terrorist holding an Armalite rifle! Despite the mass of print, each section is easy to read and understand and most technical terms are clearly explained in the introduction to each section.

Having made it known that we applaud the production of this work there are a few items to mention on the debit side. Top of the list is the price which in a work of such a size has to be on the heavy side. Even so £19.50 is a lot of money but in these days of rapidly rising costs it is not to be wondered at and many will save for a long while to add this momentous work to their libraries.

Another criticism is that surely some form of national heading could have been added to each page. As it is, if you open the book at any section the text has to be closely examined before it can be decided that one is dealing with Czech rather than Russian assault rifles, and even in the text the transition from one state to another is poorly captioned.

But these comments cannot detract from the importance of this huge book. This new Janes will soon be on the shelves of most libraries and in the honoured position in the collections of all with an interest in modern warfare and weapons. It is a superb work and our recommendations to obtain a copy if you have any chance at all are strong and sincere. Blow the cost — this book will be of the utmost value for years.



## letters to the editor

### Contributions

Letters to the editor selected for publication entitle the senders to each receive a free Airfix plastic construction kit, and the publication of photographs from readers is similarly rewarded. Airfix Products Ltd award the kits on the following scale:

ONE letter or photograph published is rewarded by any kit from Series 1-6 inclusive. For TWO letters or photographs any one kit up to and including Series 9 can be chosen, or alternatively two kits up to Series 6. For THREE contributions the entitlement is one kit up to Series 12 or three kits up to Series 6. Readers can make their choice on the special form which we send out after publication. The kits are supplied direct by Airfix Products Ltd.

Letters to the editor should be addressed to: the Editor, *Airfix Magazine*, Bar Hill, Cambridge, CB3 8EL. If a reply is wanted, a stamped addressed envelope (or International Reply Coupon) should be enclosed. All photographs submitted for consideration should be clearly labelled with the sender's name and address on the back of each.

Opinions expressed by correspondents on this page are their own and do not necessarily reflect the views of the Editor or Airfix Products Ltd.

### German markings

I WAS VERY interested in Mr Fontenoy's letter in the February issue regarding my series on German markings, especially the naval serial numbers list.

He is quite right inasmuch as the Ursinus fighter floatplane was number 782, and for some inexplicable reason was missed in my list. I have it in my manuscript and can only assume that it was left out when transcribing (see photo below).

There has always been a little mystery about this machine because it is not listed

in the Gotha section of the *Atlas Deutscher und Ausländischer Seeflugzeuge* although the earlier Ursinus-designed twin-engined machines are.

Quite recently that indefatigable researcher, Peter Grosz, found the answer. Whilst perusing the German Official Navy Records at Freiburg he discovered that the Ursinus seaplane fighter was built not by Gotha but by the small firm of Rex in Cologne. In the report of the Seeflugzeug Versuchs Kommando for the weeks of April 16-30 1917 it states: 'It crashed on its first taxi trials at 900 rpm by turning over on its nose. After this and further deliberations, the constructor has decided against further tests.'

The machine was, of course, years ahead of its time — in fact some 23 years before the Blackburn B.20 which utilised a similar idea of a retracting float incorporated into the lower fuselage. Just one of many examples of the ideas of First World War designers being well ahead of the technology available at the time.

As far as Nos 1107 and 1108 are concerned, the *Atlas* states that 1107 to 1116 were Albatros W.4s (page 91). Mr. Fontenoy may have confused Nos 1105 and 1106 which are listed as KW (Danzig) machines.

The Rumplers again pose a problem. The initial letter attached to the first 20 serial numbers was meant to indicate E for Monoplane and D for Biplane so that E4 and E8 would indicate monoplanes and, if Rumplers, could only be Tauben at this date. To confuse matters, Rumpier did produce a biplane flying boat in 1914 which was given the *manufacturer's type number of 4E*. The *Atlas* is very unclear about this, offering no more than a phrase to say that the numbers E4 and E8 are not 'firm'.





I have several photos of this flying boat and no markings at all are carried and all the people included in the pictures are in civilian clothes. Some authorities say that the 8E was a modified 4E but this is not certain either. However, the *Atlas* does state that the E4 had a 100 hp Argus engine which was one of the power alternatives fitted to the Taube in 1913/14. The 4E flying boat was fitted, according to my information, with a 150 hp Benz.

Harry Woodman, London SW14.

#### Wargames clubs

THE STRETFORD Tactical Society is a new wargames club which meets on the second Saturday of each month at the Stretford Civic Theatre between 6 and 11 pm. Both miniature and board games are played.

Further details are available from Mr C. B. Tofalos, 2 Almond Walk, Partington, Manchester (tel 061-775 3930).

The Rothwell Wargames Society is also open to new members. Full details are available from T. Marshall, 24 Elm Royd, Royds Lane, Rothwell LS26 0BW.

#### Wargame '75

THE McLELLAN Galleries, Sauchiehall Street, Glasgow, is the venue for the above exhibition, organised by Scottish Wargames Promotions, on Saturday, June 7. Wargame '75 will be open from 10 am until 8 pm and will include wargame displays, competitions and trade stands. For further information contact Dale A. Bilsland, 35 Gleneagles Cottages, Glasgow G14 9EY.

#### St Mawgan open day

RAF ST MAWGAN, Newquay, Cornwall, will present a Third International Air Day on Wednesday, August 6. The gates will open to the public at 9 am with the main flying display commencing at 2 pm. Make a note in your diaries. Ed.

#### Wrong poster

PLAISTOW PICTORIAL, 3 New Plaistow Road, London E15 3JA, have asked us to point out that the two models illustrated on page 387 of our February issue were, in fact, photographed against a backdrop of the lower section of one of their Lancaster posters, not an Aerofilms photograph as stated.

#### ALEXANDERS (Model Dept.)

268 Kentwood Hill, Tilehurst, Reading RG3 6DR

Telephone: Reading 27279

##### AIRFIX

Honda Four 750 M/Cycle £2.40  
P51D Mustang £3.60  
1930 4½ Litre Bentley £6.15  
H.M.S. Hood 69p  
Bismarck 69p

##### MATCHBOX

Westland Lysander 30p  
Hawker Fury 30p  
BAC 'S' Jaguar 55p  
Westland Lynx 55p

##### TAMIYA

1912 Model T Ford £4.85  
McLaren Marlboro £5.99  
1936 Mercedes 540 K £7.50  
1948 M.G. T.C. Midget £3.99

A full range of all kits in stock. Delivery by return. Postage paid on all orders over £1.00. Add 10p for orders under £1.00.

#### ROS FIGURES

##### 25 mm Wargame Figures Latest Additions

45p per pack of 10 infantry or 4 cavalry

French Line Lancers, Carabiniers, Guard Chasseurs a Cheval, Line Chasseurs a Cheval, Line Dragoons, British Dragoons, sold in packs of 4 cavalry at 45p. British Horse Artillery, French Guard Horse Artillery, gun and crew at 45p per pack. Polish Infantry, pack of 10 at 45p. Infantry Standard Bearers also available. Send s.a.e. for full lists of Ancient and Napoleonic Figurines all at the same amazing price.

Send s.a.e. for lists of our enormous range of original detailed micro-AFV's. Fantastic quality for 8p each.

Postage & Packing: UK orders must include 10p per pack. Overseas seamount 20p per pack, Airmail 35p per pack.

Overseas trade welcomed

Ros Figures, 93 Wolfington Road, SE27

## The collectors' pieces -make them with MATCHBOX Kits.



There are lots of kits on the market. At "MATCHBOX" we've taken the view that as an enthusiast you'll enjoy making the ones with a special place in history. Take this Junkers Ju 188. It was modified again and again right through the war. The model you'll make is the F-1 reconnaissance aircraft that worked in the North Sea with U-Boat Fleets.

You'll find that the parts go together smoothly, and there's a sleekness of finish that brings real satisfaction to model-making. Another cause for satisfaction, at prices from 30p, "MATCHBOX" Kits are superb value for money.



"MATCHBOX" Kit No. PK-109  
3-colour moulding 55p\*

"MATCHBOX" is the registered  
Trade Mark of Lesney Products  
& Co. Ltd., London, E9 5PA.

\*Recommended retail price at  
time of going to press.

No.5

# What do you know about the police?



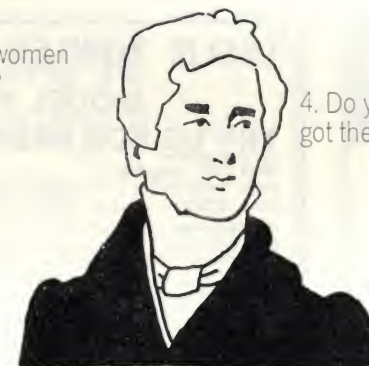
1. How many police  
motorbikes are there in  
England and Wales?



2. What is the minimum  
number of people  
required on an  
identification parade?



3. Can policewomen  
make arrests?



4. Do you know how policemen  
got the nickname of "Bobbies"?



5. How many police officers in England  
and Wales received national awards for  
bravery in 1972?

This is the fifth in a series showing the background, present-day working and development of Britain's police. If you missed any of the previous ones and would like copies, or would like further information about the police, please write to:-  
Police Quiz, Dept A115 Home Office, London SW1A 2AP.

#### ANSWERS

1. Nearly 3,700.
2. Eight.
3. Yes, a policewoman has the same powers as a policeman.
4. From Sir Robert Peel, Home Secretary when the Metropolitan Police was formed in 1829.
5. 45.



## When it comes to finishing we're right behind you!

Nothing can match the superb finish that an airbrush can give... and there's a Badger model to meet every need and pocket.

**Model 250**  
Designed for the beginner, but capable of a good finish. Easy to use single action. Will spray all suitable compounded materials.

**Model 200**  
Instant/fine/full control by adjusting the screw. An excellent brush for the more experienced. Fitted with teflon head seals and needle bearing.

**Model 100 XF**  
Ultra-fine line with smooth fingertip control. Fitted with detachable free-standing side cup, which adjusts to any angle.

**Model 100 GXF**  
As the model above, but with integral fluid bowl. Specially designed for users who prefer a gravity flow of material. Both the '100' models are eminently suited to professional use.

**JOIN THE BADGER SET**

Send NOW for illustrated brochure.

**MORRIS & INGRAM (London) LTD**

MASTER DISTRIBUTOR FOR THE U.K.  
Sales, Service Division for the Badger Airbrush Company  
156 Stanley Green Road - Poole - Dorset. Tel: 3757

## Titan Dustcovers

thermoformed in lightweight  
crystal-clear plastic



Stocked by all the best model shops

Send S.A.E. now for brochure

Sizes available	De-luxe Price	P&P Extra	Suitable for
26" x 6" x 7" high	£2.64	46p	Ships
18" x 7" x 9" high	£1.85	37p	Large Tanks
13" x 6" x 5" high	99p	37p	Cars
18" x 7" x 6" high	£1.49	37p	Aircraft
6" x 6" x 2 1/2" high	43p	18p	Militaire
18" x 18" x 5 1/2" high	£2.38	46p	(foot and mounted)
5 1/4" dia. x 5 1/4" high	50p	18p	Dioramas, etc., etc.
6" x 3" x 2 1/2" high	36p	18p	Aircraft, Dioramas, etc.

**TITAN MANUFACTURING CO.** Tel. 01-574 3173  
24/26 HIGH STREET · SOUTHAL · MIDDX. · ENGLAND

## modelscene LTD

MONOGRAM Model Kits	Price	TAMIYA Model Kits	Price
1/24 1930 Ford "A" Coupe	£2.00	1/12 Texaco McLaren F.1	£5.99
1/24 1958 Ford Thunderbird	£2.00	1/12 Tyrrell Ford F.1	£5.99
1/24 1926 Mack Tank Truck	£3.50	1/6 Harley Davidson Bike	£13.99
1/24 1926 Mack Stake Truck	£3.50	1/35 Quad Tractor & Gun	£2.85
<b>ERTL Truck Kits</b>		<b>SOLIDO Die Cast Series</b>	
1/25 International F4270	£3.50	1/43 Lancia Stratos	£1.36
1/25 International 4070A	£3.50	1/43 BMW 3000 Rally	£1.36
<b>MODEL KITS</b> Bandai · Otaki		1/43 Citroen 15 Six	£1.99
Airfix · Revell · Gakken · MPC		<b>DIECAST MODELS</b> Sabra · Polistil	
Pocher · AMT · Johan · Life Like		Rio · Super Champion · Auto-Pilen	
		Majorette · Safir · Norev	

**154 STREATHAM HILL, LONDON SW2 4RU**  
01-671 2613

Send S.A.E. for list. Please add 10% to orders up to £5,  
over £5 post free. All items subject to availability.

## LESLIE BOWLER OF NEW CROSS

### MODEL STOCKIST

### TRY US FOR MILITARY VEHICLES

ESCI 1/72 Only 55p		
8001 PzKpFW III	8002 HANOMAG	8003 PzKpFW II
8004 WESPE	8010 MARDER III	8011 HETZER

<b>TAMIYA 1/35</b>	
M.3 LEE Mark 1	£1.65
M.3 GRANT Mark 1	£1.65
STUART M.3	£1.20
FORD G.P.A. Jeep	£1.20
QUAD Gun Tractor	£1.75
With 25 Pdr	£2.85
CARRO ARMATO M13/40	£1.60
M113 Personal Carrier	£2.50
KETTENKRAFTAD	£1.20
8 WHEEL ARMoured CAR Sdkfz 232	£2.99

<b>1/25 Scale</b>	
CENTURION Mk III RC or INTERIOR DETAIL	£10.99
SU 100 Motorised	£5.60
R.C.	£6.99
T34 Type 85 Motorised	£5.60
R.C.	£6.99
PANZERKAMPFWAGEN V PANTHER Motorised	£6.99
R.C.	£8.50

<b>ITALAERI 1/35</b>	
OPEL BLITZ Truck	£1.60
TIGER P ELEFANT	£3.20

Postage. Up to £1.00 please add 15p. Up to £2.00 add 20p. Up to £3.00 add 25p. Up to £5.00 add 35p. Over £5.00 postage FREE.  
JUST A SMALL SELECTION OF OUR MILITARY KITS.  
LARGE STOCKS OF TAMIYA ALWAYS IN STOCK.  
CALL IN. PERSONAL CALLERS WELCOME or TRY OUR FAST POSTAL DESPATCH SERVICE.

**LESLIE BOWLER LIMITED**

126 NEW CROSS ROAD, LONDON S.E.14 Tel. 01 732 6843  
Ample parking space

# AIRFIX magazine

Please address your correspondence to  
**Airfix Magazine,**  
Classified Advertisement Department,  
Bar Hill, Cambridge, CB3 8EL.

## CLASSIFIED ADVERTS

**Rates** 8p per word. Minimum charge 80p.  
**Box numbers** 30p extra charge.  
All advertisements must be prepaid.  
Please state classification required.

Closing date for next issue May 1st

### FOR SALE

**'PAM News.'** The Plastic Aircraft Modellers' Magazine. Sample copy 37p. 22 Stayleigh Avenue, Sheffield S10 3RB. (1821S)

**North's Cards** — Over 600 uniform details popular and rare, also charts and 30 mm flats for wargames. All colour-yourself sets. 25p to 80p. S.A.E. to 'North Cards', Flat A, 6 Willow Road, London NW3 1TH. (1822S)

**Airfix Magazines.** November 1970 to December 1974. Offers. 66 Cambria House, Larner Road, Erith, Kent. (1826S)

**1/150 AFV.** Card Models of World War II Allied and German vehicles allow economical construction of realistic wargames and dioramas. (Compatible with N-Gauge). For full details, send for introductory 3 card (6 vehicle) pack: 25p (inc. p. & p.). Greening, Knoll Cottage, Knoll Road, Dorking, Surrey. (1829S)

**AFV-G2.** The U.S. Armor magazine the experts take. Send for sample 50p (UK) or \$1 (US) or 12 issue subscription £5 (UK) or \$10 (US) to Greening, Knoll Cottage, Knoll Road, Dorking, Surrey, or S. Steuard, Box 293, La Puente, California 91747. (1830S)

The publishers of AIRFIX MAGAZINE must point out to readers that, while every care is taken to check the bona fide nature of all advertisements, they cannot accept any responsibility for disputes which might arise

**Modeller selling up.** Hardback books, paints, tools, drawings, in pristine condition at half-price. S.A.E.s to: A. McGill, 127 Westmorland Avenue, Blackpool. (1827S)

**Fibre-glass dioramas** for sale in OO-HO scale. Also made to order. S.A.E. for details to Mr. M. Nixon, 14 Larchlea South, Ponteland, Northumberland. (1828S)

**Just Published**  
**U.S. NAVY WARSHIP CAMOUFLAGE, 1939-45,**  
by Chris Ellis

Essential reference guide for all warship modellers and enthusiasts. Includes model paint guide, 10,000 words text, 60 illustrations. 8 1/4" x 5 1/2", soft covers. £1.20 (+10p post) (USA \$3.95)

**Pique Publications (A),** North Lea House,  
66 Northfield End, Henley-on-Thames, Oxon.

### WANTED

**A few Humbrol 'Tinlet' Trays** (plastic). Each holding eighteen tins. Saunders, 'Greenbanks', Lower Row, Holt, Wimbomb, Dorset. (1823W)

**Wanted:** Airfix 1/72 Whirlwind, Frog 1/72 Wessex, made, part-made or un-made. Also any unusual 'Copter' kits. Write: Mr. A. Norris, 13 Athelney Street, Bellingham, SE6 3CE. (1825W)

### MISCELLANEOUS

**Exchange.** For trade Allyn DC-7, DC-7C; Strombecker PAA China Clipper; Hawk Constellation; Helicopters for Industry S-55; I.T.C. Grumman Goose; Desk models of small 720 and 720B; DC-9 Playboy and Air Canada. **WANTED** Frog 707 Qantas and Irish International; Revell 707 United, Pan Am, Aer Lingus, B.O.A.C., and Varig; Revell DC-8 Pan Am, and KLM; Revell CV990 Garuda. USA only send S.A.E. All other countries send two international postal reply coupons for list. Dennis Timm, 1911 -W- Folsom Street, Anaheim, California 92804, U.S.A. (1824M)

## Getting it regularly?

Wise readers make sure of getting their copy of *Airfix Magazine* each month by taking out an annual subscription. No more hunting bookstalls for the latest issue — have it delivered right to your front door. That way you make certain of not missing the article, review or advertiser's bargain you particularly want to see. Place your subscription now by using the form below.

To Airfix Magazine, Subscription Department,  
Surridge Dawson & Co (Productions) Ltd,  
136/142 New Kent Road, London SE1.

Please send my *Airfix Magazine* each month by post on publication for a 12 month period commencing with the \_\_\_\_\_ issue. I enclose my cheque/postal order (not cash or stamps) for £3.40 (postage included). (USA \$8.75).

Date \_\_\_\_\_ Signed \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

Please write clearly in block capitals

A5/75

## Phoenix Model Developments Ltd.



**'BYGONE AGE' 19th Century Royal Mail Coach** (1/32 scale)  
KIT PRICE £5.94 (including transfers)  
Horses to suit above  
Type C/A Kit £1.75 Type C/B Kit £1.75  
Made from fine English Pewter  
**'BYGONE AGE'** leaflet S.A.E. please  
Military Catalogue Handbook 45p  
All items post free. Access and Barclaycard accepted.

**Phoenix Model Developments Ltd.**

Producers of Miniature Historic Figures & Scale Models etc.  
The Square, Earls Barton, Northampton, England.  
Telephone Northampton 810 612



## What a bind!

Due to increased costs at all levels, including the new postal charges which took effect last month, we have regretfully been forced to raise the price of our AIRFIX MAGAZINE EASIBINDERS to £2.25 each. As an investment to protect your valuable back issues though, these Easibinders still represent truly excellent value for money. Order now for last year's, this year's or even next year's copies, using the form below.

To Airfix Magazine, Easibinder Department,  
PSL Publications Ltd, Bar Hill, Cambridge CB3 8EL.

Please send me \_\_\_\_\_ special **Airfix Magazine Easibinders** immediately at £2.25 each including VAT and postage. I enclose my cheque/postal order (not cash or stamps)

for £ \_\_\_\_\_ Signed \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

Please write clearly in block capitals

A5/75

## Two Militaria Bestsellers

### Armour in Action 4

## The Churchill

Bryan Perrett

"... uncover(s) much that is new and of interest ... wealth of illustration ... recommended ..." RUSI.

8½" x 5½" 148 pp inc 22 diagrams, plus 32pp illustrations £3.15

## Tank Battles of World War I

Bryan Cooper

"Well illustrated ... very clear maps ... an appendix of diagrams showing ... the early Mark 1s, Mark IVs etc" AIRFIX.

8½" x 5½" 95pp inc 17 diagrams plus 48pp illustrations £2.50

**IAN ALLAN**

Terminal House Shepperton TW17 8AS

## 15 mm METAL FIGURES by PETER LAING

### ENGLISH CIVIL WAR AND THE 30 YEAR WAR. "500" SERIES

This series covers the period of warfare in Europe, 1600-1660

F501 Musketeer in hat, firing	4p	F502 Pikeman in helmet, repelling cavalry	4p
F503 Musketeer in hat, marching	4p	F505 Standing drummer, in hat	4p
F504 Standard bearer	4p	F507 Musketeer in hat, loading	4p
F506 Standing pikeman, in hat	4p	F509 Pikeman in helmet, marching	4p
F508 Pikeman in helmet, standing	4p	F511 Officer with drawn sword	4p
F510 Officer standing, with partisan	4p	F513 "Peasant type" standing, with cudgel	4p
F512 Scottish musketeer, firing	4p	A504 Gunner holding sponge	4p
F514 "Peasant type" marching, with bill hook	4p	A506 Gunner with portfire	4p
A503 Gunner with handspike	4p	M502 Mounted cuirassier	8p
A505 Gunner with bucket	4p	M503 Mounted English/Swedish trooper in hat, horse trotting	8p
M501 Mounted English/Swedish Trooper, in helmet	8p	M506 Mounted standard bearer, in hat	8p
M504 Mounted armoured lancer	8p	A501 Culverin	12p
M505 Mounted trumpeter, in helmet	8p		
A501 Culverin	12p	A502 6 pdr canon/saker	12p

### "1000" SERIES

These figures are suitable for Montrose's army and can also be used with the Marlburian series for the '15 or '45 rebellions

F1001 Highlander with Lochaber axe	4p	F1002 Highland chieftain with musket and shield	4p
F1003 Highland piper	4p	F1004 Highland drummer	4p
F1005 Highland standard bearer	4p	F1006 Highland clansman with claymore and shield	4p
F1007 Lowland musketeer on guard	4p	F1008 Advancing highlander	4p
F1009 Highlander firing	4p	F1010 Lowlander firing	4p
M1001 Mounted highland officer	8p		

P&P extra. Orders up to £1, 12p; £2, 14p; £3, 16p; £4, 18. Over £4 Post Free

ALSO FEUDALS — COLONIALS — MARLBURIAN — MEDIEVAL — CRIMEAN  
AW.I — WORLD WAR I — ANCIENTS — Sending long S.A.E. for list

Please note new address: **PETER LAING**

Minden, Sutton St. Nicholas, Hereford, HR1 3BD

## AIRFIX MRRRC

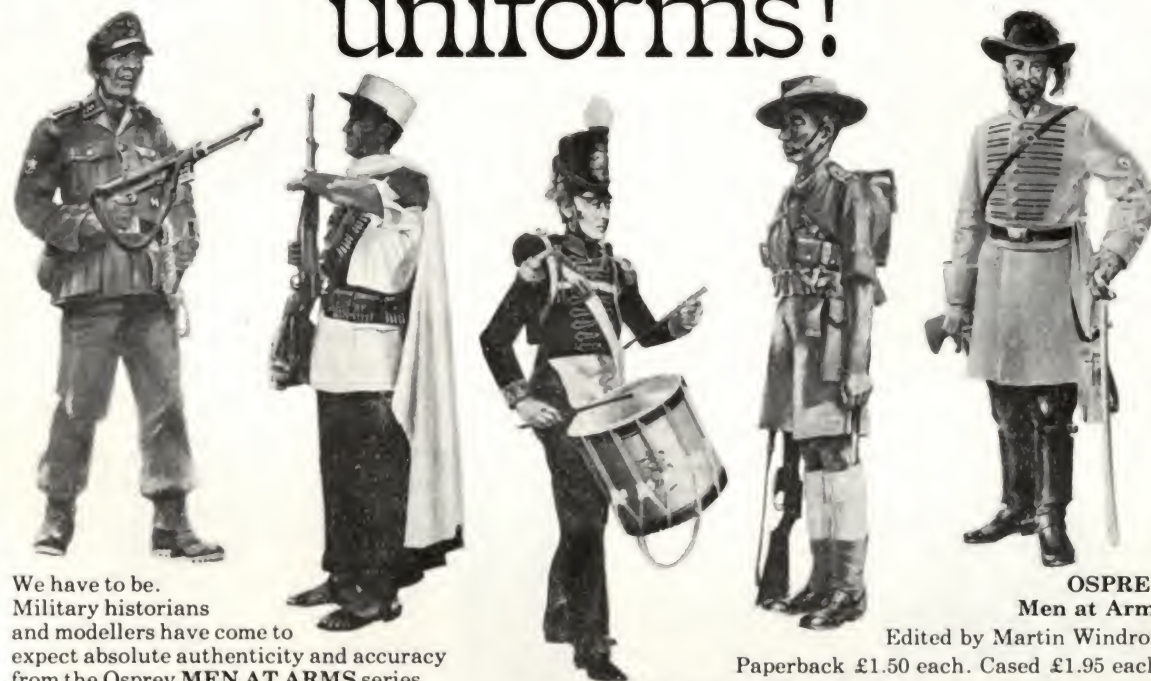
## FOR YOUR AIRFIX MOTORACE SETS and ACCESSORIES and all SLOT CAR RACING EQUIPMENT

Please send 10p for catalogue and price lists to MRRRC Ltd.,  
29 Ashley Road, Boscombe, Bournemouth, Hampshire.

NAME .....

ADDRESS .....

# We're very fussy about uniforms!



We have to be. Military historians and modellers have come to expect absolute authenticity and accuracy from the Osprey **MEN AT ARMS** series.

Over 50 titles have already been published, ranging from the armies of the Seven Years War to World War II, providing a concise history of the regiments and armies. The uniforms are described and illustrated with at least 40 photographs or drawings, and up to 24 full colour figures, painted in accurate detail; at least twice the colour content of any similar series.

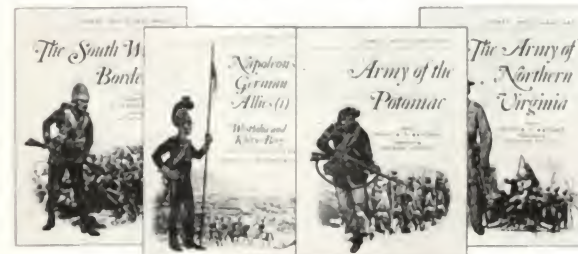
### Four new titles now available:

**Army of the Potomac** by Philip Katcher

**The South Wales Borderers** by C. Wilkinson-Latham

**The Army of Northern Virginia** by Philip Katcher

**Napoleon's German Allies (1)** by Otto von Pivka



**OSPREY Men at Arms**

Edited by Martin Windrow

Paperback £1.50 each. Cased £1.95 each.

### Other new titles from Osprey:

**A Concise Dictionary of Military Biography** by Martin Windrow & Francis K. Mason. £5.95

The greatest names in land warfare, from the 10th to the 20th century. Publication June

**British Battlefields: Scotland and the Border** by Philip Warner. £2.95

The final book in this series covering all the major battle sites in Britain.

Available from booksellers, or in case of difficulty from:

Direct Mail Manager, 137 Southampton Street, Reading, Berkshire.

Please send me \_\_\_\_\_ copy/ies of \_\_\_\_\_

I enclose cheque/P.O. value \_\_\_\_\_ (add 25p p&p)

Please send me a FREE illustrated catalogue of all Osprey Militaria books. ☐

Name \_\_\_\_\_

Address \_\_\_\_\_

A5/75

# Osprey Publishing Limited

(Member Company of the George Philip Group)





# YOUR INTERNATIONAL MODEL MAIL ORDER HOUSE



Suppliers to the British and Overseas Governments

## BMW's OWN IMPORTS

### ARH 1/48

U.S. Tractor and Trailer  
U.S. Tractor and 155mm Gun

£2.00  
£2.00

### COMMAND AND RECONNAISSANCE TRUCK



### MAX 1/35

US 3/4 ton Weapons carrier  
US Command and Reconnaissance Truck  
US M-6 37 mm A/tank gun carriage  
US 1 1/2 ton Personnel carrier

£2.40  
£2.40  
£2.15  
£2.95

### GERMAN TRUCK OPEL BLITZ 3-00 S. Type



## HUMBROL BADGER AIR BRUSHES



### 'A' HUMBROL BADGER AIRBRUSH SET

Contents: 200 airbrush airline,  
power pack connector, 4 jars, power  
pack, instruction leaflet, guarantee

£19.40

### 'B' HUMBROL BADGER 250 SPRAY GUN

Contents: 250 spray gun, airline,  
power pack connector, 2 jars,  
instruction leaflet

£5.06

### 'C' HUMBROL BADGER 250 SPRAY GUN SET

Contents: 250 spray gun airline,  
power pack connector, 5 jars, power  
pack, instruction leaflet

£6.21

### OTHER BADGER AIRBRUSHES

100 XF Fineline airbrush

£26.70

with cup

100 IL Fineline airbrush

£26.70

with cup

150 IL Poster airbrush

£28.30

BADGER ACCESSORIES

20 oz. propellant

£1.10

12 oz. propellant

70p

MP 1033 portable air compressor

£40.00

with adaptor

50-029 tyre adaptor

84p

50-0252 spare jar with lid

19p

50-0241 Jar gaskets (3)

24p

50-200 Air regulator

£2.96

50-004 On/off valve

£1.12

50-001 6 ft. air hose

£1.09

50-001 10 ft. air hose

£2.16

### POCHER 1/8

Fiat 130 HP Grand Prix  
de France 1907

£43.00

Alfa Romeo 8 C-2300

£55.00

Monza

Rolls Royce Phantom II

£85.00

Drophead coupe

1932

Alfa Romeo Spider Grand

£65.00

Sports 1932

These prices include VAT

and postage

HASEGAWA 1/72 A.F.V.

G.M.C. Personnel Carrier

G.M.C. Gasoline Truck

G.M.C. Dump Truck 37p each

BANDAI 1/15 A.F.V.

German Howitzer SP IV

£10.65

150mm Hummel

1/48 A.F.V.

Long Tom

£1.20

T34 Russian Tank

£1.49

NICHIMO 1/35 A.F.V.

PxKpKw IV German Tank

£1.79

NEW AIRFIX

George Washington

32p

Prinz Eugen

86p

Tribal Class Destroyer

23p

Spitfire V

32p

JAPANESE  
SWORDS

MIDORI 1/3

These are really beautiful, when  
made up and painted and are  
about large dagger size

TOKUGAWA IEYASU'S  
SWORD

TEKEDA SHINGEN'S SWORD

VOSHITSUNE'S SWORD

£1.40 each

IMAI 1/24 CANNON

155mm Cannon, with movable

£2.40

parts, a great kit,

Tractor (motorised) to go with

£3.20

above

FUJIMI 1/76

SU 85; T34/85; CHI HA 97

56p each

MONOGRAM

1/35

Spahwagen; Ostwind

£2.55 each

REVELL

1/125

German Submarine U-47

Solid version £1.62

Visible interior

TAMIYA WATERLINE 1/700

Hornet

Enterprise

ENTEX

1/350

Titanic

★ The Finest WRITING  
and PAINTING BRUSHES

A BMW direct import from Japan.

FINE BRUSHES FS 20p FM 25p

FLATS F2 20p F4 22p F6 24p

ROUNDS R0 15p R1 16p R2 17p R4 18p

MIXED SET OF 5 BRUSHES as packed 98p



MiG-17 PF

## NEW KITS

### K.P. Czechoslovakian 1/72

Aero L-29 Dolfin

Avis B.534

Ilyushin Il-10/Avia B-33 La 7

Mig 19

Letov S 328

La-7

ONLY  
52p  
EACH

### JOHAN 1/72

Me 262

A-1a, A-2a, -B-1a or

B-1a/VI

Airmodel Conversions

161 North American AJ1

Savage

183 Convair XF 2V-1

Seadart

182 Junkers 287

AIRFIX

P51D Mustang 1/72

remould

TAMIYA

AIRCRAFT 1/48

Buffalo

REVELL

1/125

SUBMARINE

German U-47

Solid version

Visible interior

£1.62

£2.18

ITALAEREI 1/72

Ju 199

£1.49

L & S 1/72

Hayabusa Type 1

(Oscar)

33p

Hayabusa Type 2

(Oscar)

33p

Zero Fighter Type 21

33p

Zero Fighter Type 52

33p

Zero Fighter Type 2

2 seaplane

33p

Suisei Type 12 (Sudy)

33p

Suisei Type 33

33p

Willow Type 93 wheeled

75p

Willow Type 93 floats

75p



2式水戦

RUFE

ST

## POSTAGE

Minimum Charge

Orders up to £1

£1-£2

£2-£3

£3-£4

£4-£10

£10-£15 postage £1.00

Over £15 Postage Free

VAT

Please add 8% to grand total

of goods and postage.

OVERSEAS POSTAGE

AND PACKING EXTRA

## HOME TRADE ORDER DEPT.

for personal service to every  
small retailer. Other B.M.W  
Depts. are:

### OVERSEAS

Retail Mail Order

Trade Orders

### HOME

Retail Mail Orders

Home Trade Orders

and naturally, visitors

are always welcome to

OUR SHOP

SEE  
OUR  
ADVERT  
ON  
PAGE  
519

BMW MODELS, 327/329 HAYDONS ROAD, WIMBLEDON, LONDON SW19 Telex 928374 01-540 7333/4

Printed in England by Blackfriars Press Ltd., Leicester